Coordinated Environmental Assessment Report for the Western Beaches Watercourse

Prepared for
Toronto Waterfront Revitalization Corporation
City of Toronto

Submitted by
Gartner Lee Limited

May, 2005

Gartner Lee

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Reference: **GLL 50-170**

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3 Toronto Waterfront Revitalization Corporation
3 City of Toronto
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3 Ministry of Natural Resources
1 Ministry of Environment
1 Ministry of Public Infrastructure Renewal
2 Citizenship and Immigration Canada
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1 MacViro Consultants Inc.
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May 30, 2005

Ms. Karen Pitre
Toronto Waterfront Revitalization Corporation
207 Queen's Quay West, Suite 822
Toronto, ON M5J 1A7

Dear Ms Pitre:

Re: GLL 50-170 – Co-ordinated Environmental Assessment Report for Western Beaches Watercourse

We are pleased to provide the Final Report for the Co-ordinated Environmental Assessment Report for Western Beaches Watercourse. Comments received to date have been reviewed and revisions made accordingly.

As discussed, copies have been forwarded to the TWRC, TRCA and the Urban Affairs Library for public review as agreed through previous discussions. The report will be available for public viewing from May 31, 2005 through June 30, 2005.

Should you have any questions regarding the report, please feel free to contact me at ext. 319.

Yours very truly,
GARTNER LEE LIMITED

Jo-Anne Lane, M.Sc.
Senior Ecologist

JAL:mm
Attach.

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1. Introduction

This Environmental Study Report (ESR) documents the planning process followed and conclusions reached for the Western Beaches Watercourse Coordinated Environmental Assessment. The City of Toronto (City) won the bid to host the International Dragon Boat Federation (IDBF) Club Crew World Championships (CCWC) for 2006. As part of winning the bid, three conditions were attached. Firstly, the award is conditional on the City building a new venue in the Western Beaches. Secondly, the federal government's commitment for funding needed to be in-place by September 30, 2004. Lastly, and perhaps most importantly, the new Western Beaches watercourse must be ready for use by June 1, 2006.

In order to accommodate the new watercourse, a new breakwater needs to be constructed farther from the Lake Ontario shoreline than the existing breakwater. The watercourse is to be located west of the Ontario Place island complex, across from Marilyn Bell Park (see **Figure 1**). While the watercourse is being constructed to facilitate hosting the IDBF CCWC in 2006, it will greatly increase the area of flatwater available to all recreational boating sports using the Western Beaches. The intent is to provide a multi-sport watercourse that would potentially serve the needs of not only those involved in dragon boating, but also rowing, flat water canoeing, kayaking and other water sport activities.

The City and the Toronto Waterfront Revitalization Corporation (TWRC) are co-proponents for the Project. The Toronto and Region Conservation Authority (TRCA) is acting as Project Manger, overseeing the environmental assessments, design and implementation of the project.

1.1 Project Background

In response to the conditions of the City's winning bid to host the IDBF's 2006 CCWC, the Toronto Waterfront Revitalization Corporation (TWRC) prepared a study entitled "Dragon Boat Course Feasibility Study - Final Report" between July and September of 2004. The objective of this study was to investigate the feasibility of constructing a multi-sport watercourse facility along the Western Beaches. It was the vision of many stakeholders that such a watercourse would become a legacy to the City and its revitalized waterfront.

The international standards for regatta courses for rowing, canoeing/kayaking and dragon boat racing were obtained and reviewed in light of the characteristics offered by the proposed site. Dragon Boat race course standards are set by the IDBF. Rowing course standards are set by the International Federation of Rowing Associations (FISA), and canoeing watercourse standards are set by the International Canoe Federation (ICF). Rowing almost always involves longer event-distances and must have wide lanes, whereas canoe-kayak racing and dragon boat racing can usually "fit within" the dimensions and parameters of rowing courses. Therefore, since FISA is very strict with its regulations and standards and does not allow competitions to take place at venues that do not meet the required standards, in most cases venues that have been approved by the FISA or the ICF would also be feasible for Dragon Boat competitions.

Gartner Lee

MacViro

Baird

Regional Context of New Watercourse

Western Beaches Watercourse EA

Project 50170, May 2005

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Figure 1

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For the purpose of evaluating the feasibility of constructing a multi-sport watercourse, a range of watercourse options was considered. The options involved different watercourse lengths, widths and orientations. Some of the options were conceived to specifically serve Dragon Boat racing, while other options were able to serve many sporting activities. A total of eleven watercourse options were subject to a detailed evaluation of their potential effects on the environment, including the natural, social and financial environments. Since all options would require the removal of at least portions of the existing breakwater, the construction of a new breakwater would be required for all eleven options. From a purely technical point of view, all of the watercourse options could be constructed, although there was one that would not be conducive to providing sufficient shelter for water sports.

To serve the full range of water sports at the International and Championship rowing regatta level sanctioned by FISA, the watercourse design would have to be at least 2,150 m in length. While three of the eleven watercourse options would meet this standard, the estimated costs associated with such watercourse designs would be extremely high. As a result, several of the watercourse options were developed as smaller courses with the intent that they could be extended in the future to meet the criteria to host International rowing regattas and other championship water sporting events once additional funding had been secured. The Feasibility Study concluded that in light of the available funding at this time and the extremely tight schedule to construct a course before June 1, 2006, the shorter watercourse options provided the best opportunity to host the IDBF CCWC in 2006.

It was recognized that construction of one of the smaller watercourse options would not necessarily serve the needs of rowers or canoers when first built (at least not to host an International or Championship level regatta), but would at least provide additional flatwater area for training purposes and hold the potential for future expansion. The watercourse would be configured in such a way as to accommodate a future extension that would allow the expanded course to meet international or championship level rowing regattas and ICF canoeing events.

2. Overview of the Co-ordinated Environmental Assessment Process Followed

A co-ordinated Environmental Assessment (EA) process has been undertaken to satisfy the requirements of both the provincial Environmental Assessment Act (EA Act) and federal Canadian Environmental Assessment Act (CEA Act) for this project. The Canadian and Ontario governments reached an agreement on EA co-operation on November 1, 2004. The "Canada-Ontario Agreement on Environmental Assessment Co-operation", creates an administrative framework for federal-provincial co-operation on the EA of projects subject to both the CEA Act and the EA Act. This agreement provides a means of avoiding the duplication of effort associated with undertaking both processes separately, and therefore minimizes the time requirements to achieve EA approvals.

2.1 Ontario Environmental Assessment Act

2.1.1 Municipal Class EA

The Municipal Engineer's Association (MEA) Municipal Class EA is an approved process under the EA Act that allows municipal proponents like the City to meet the requirements of the EA Act for municipal infrastructure undertakings.

Since the construction of a new breakwater is classified as a Schedule 'C' undertaking (Pg. 1-17, Item 9), completion of the following four Planning and Design Phases was required:

- **Phase One: Identify the Problem / Opportunity**

  This phase involves not only identifying the problem / opportunity, but also describing it in sufficient detail to lead to a clear problem / opportunity statement **(See Section 3)**.

- **Phase Two: Identify and Evaluate Alternative Solutions to the Problem / Opportunity**

  This phase involves six steps **(See Section 4)**:

  1. identify reasonable alternative solutions to the problem / opportunity;
  2. prepare a general inventory of the existing natural, social and economic environments in which the project is to occur;
  3. identify the net positive and negative effects of each alternative solution including mitigating measures;
  4. evaluate the alternative solutions;
  5. consult with review agencies and the public to solicit comment and input; and
  6. select or confirm the preferred solution.

- **Phase Three: Identification / Evaluation of the Design Alternatives for Implementing the Preferred Solution**

  This phase also involves six steps **(See Section 5)**:

  1. identify alternative design concepts for implementing the preferred solution;
  2. prepare a detailed inventory of the existing natural, social and economic environments;
  3. identify the net positive and negative effects of each alternative design concept including mitigating measures;
  4. evaluate the alternative design concepts;
  5. consult with review agencies and the public to solicit comment and input; and
  6. select or confirm the preferred design concept.

- **Phase Four: Preparation of the Environmental Study Report**

  This phase involves the documentation of the three preceding phases in an Environmental Study Report (ESR) for review by agencies and the public.

  Once completed, the ESR is placed on public record for a period of at least 30 calendar days to allow agencies and the public an opportunity to review it. During this review period, concerned individuals have the right to request the Minister of the Environment (Minister) grant a Part II Order before the project may proceed to implementation. A Part II Order requires an Individual EA to be carried out and submitted to the Minister for review and approval. The decision on whether the project should be subject to a Part II Order rests solely with the Minister.

Following completion of the four phases required to fulfill the planning and design process for a Schedule 'C' project under the Municipal Class EA, the project may proceed to Phase Five if there are no outstanding Part II Order requests once the review period has expired.

- **Phase Five: Complete Contract Drawings and Documents and Proceed to Construct, Operate, and Monitor the Project**

  This Phase involves completing contract drawings and tender documents incorporating the preferred solution and/or design concept and mitigating measures identified during the process. Once contracts are awarded, construction can take place and the project is implemented. Any monitoring programs identified during the process shall be undertaken to ensure that the environmental provisions and commitments made during the process are fulfilled and effective.

Figure 2 illustrates this five phase Municipal Class EA process followed for this project.

OVERVIEW OF THE CLASS ENVIRONMENTAL ASSESSMENT PROCESS

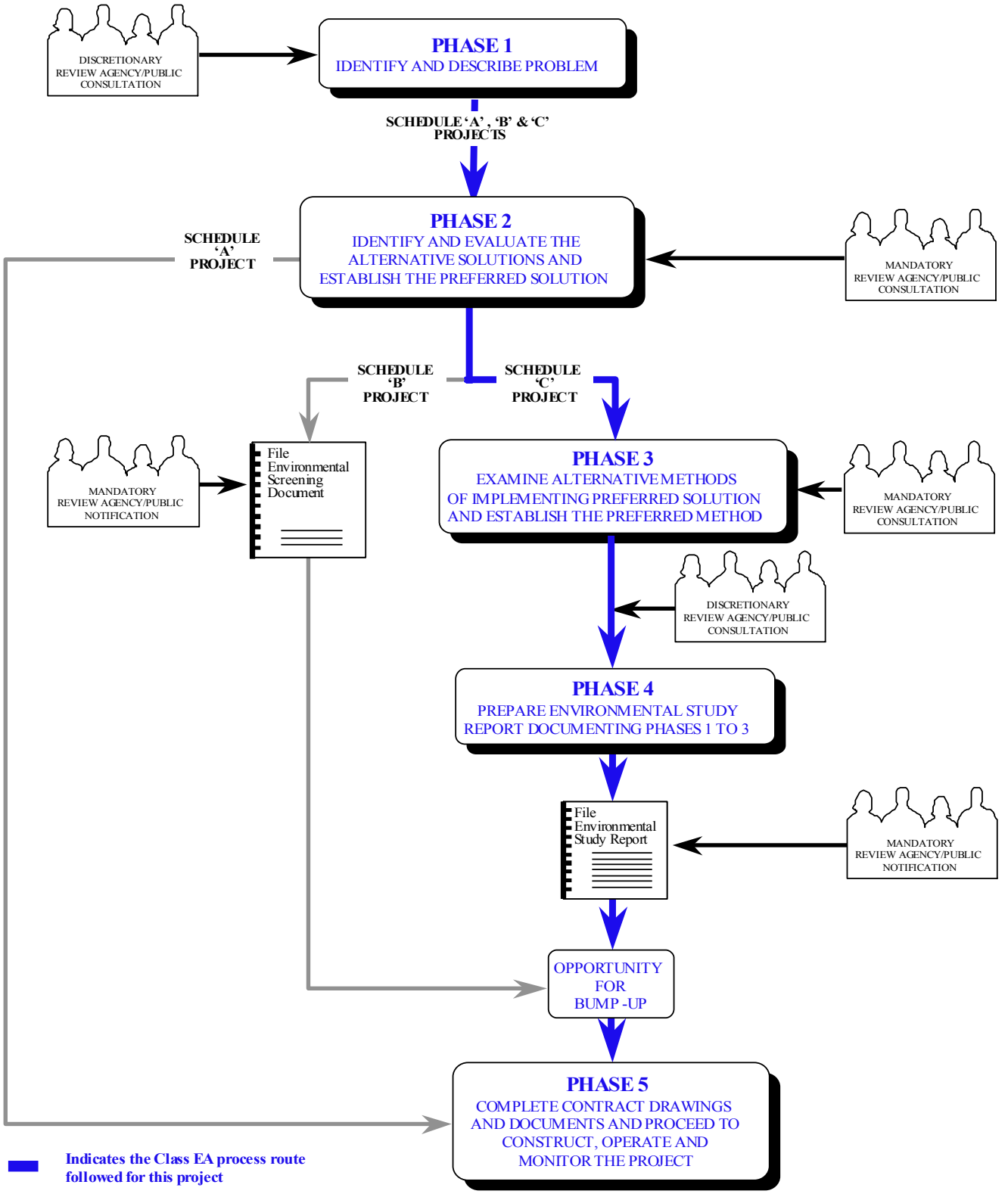

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Figure 2: Municipal Class EA Process Flow Chart

Western Beaches Watercourse EA

Project 50170, May 2005

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2.1.2 Resource Stewardship and Facility Development Projects Class EA

Since the Crown owns the lakebed associated with the new watercourse, the disposition of rights to Crown resources is part of this project and a permit from the Ministry of Natural Resources (MNR) is required. The disposition of rights to Crown resources is subject to a Class EA for MNR Resource Stewardship and Facility Development Projects when conducted by MNR or MNR in co-operation with its partners.

Since the proponents for this project are the City and TWRC and this project is subject to the EA Act (i.e., MEA's Municipal Class EA), MNR is not required to screen and categorize this project in accordance with the Class EA for MNR Resource Stewardship and Facility Development Projects. As a result, this project does not have to proceed through an additional prescribed planning and consultation process. Instead, the City and TWRC need to provide evidence (i.e., a letter) to MNR indicating that they have complied with their requirements under the EA Act so as to allow MNR to proceed with the disposition process.

2.2 Canadian Environmental Assessment Act

2.2.1 Environmental Assessment Requirements and EA Guidelines

The Western Beaches Watercourse Facility is considered to be a "physical work" and is therefore considered a "Project" under the CEA Act. Additionally, the project is not described or listed in the *Exclusion List Regulations*, and therefore is not specifically excluded from an EA under the CEA Act. Due to the provision of federal funding for the project from Citizenship and Immigration Canada (CIC), there is a CEA Act "trigger", and an EA is required for this project to proceed. Specifically, prior to the disposition of the funds, the CIC is required to fulfill the requirements of the CEA Act.

Where a project is subject to the CEA Act, the Responsible Authority (RA) for the project is defined as the federal authority that is required (pursuant to subsection 11(1) of the CEA Act) to ensure that an EA of the project is conducted. The RA in this case is CIC because a decision was made in January 2005 by the Federal Government to transfer the responsibility for the project from Human Resources and Skills Development Canada (HRSDC) to CIC. Therefore, CIC has taken on the role as an RA in the federal EA for this project.

For this project, a screening level assessment under the CEA Act is required because it is not defined within the CEA Act *Comprehensive Study List Regulations*.

In addition to a funding trigger, the Project also triggers the CEA Act as a result of the regulatory triggers found in the *Law List Regulations*. The Department of Fisheries and Oceans (DFO) will be involved in providing approval under Section 35(2) of the federal Fisheries Act, and Transport Canada (TC) will be involved in providing approval under Section 5(1) or 5(2) of the federal Navigable Waters Protection Act. As a result, both DFO and TC are also RAs for the project. Where projects have more than one RA, one generally takes on the "lead" role. In this case, CIC will take on this role as the Lead RA. However, all

RAs for the project have the discretion to define the scope of the Project and the scope of the assessment, provided that the EA conforms to Section 16 of the CEA Act. Therefore, each of the RAs, CIC, DFO and TC, will make a determination regarding the EA pursuant to Subsection 20(1) of the CEA Act.

Environment Canada, Health Canada and the Toronto Port Authority have identified themselves as federal Expert Authorities, and will provide input and comment.

The Canadian Environmental Assessment Agency (CEAA), which is fulfilling the role of Federal Environmental Assessment Co-ordinator (FEAC), will submit the required documentation to the RAs and federal Expert Authorities, ensuring that the co-ordination process proceeds efficiently and that circulation of reports and documentation occurs. In the case of the RAs, this information will be required so that they may make their decisions pursuant to Subsection 20(1) of the CEA Act.

2.2.2 Scope of the Project

Table 1 identifies the Project Components according to key Project Phases: Site Preparation, Construction, Operations and Maintenance, Decommissioning and Abandonment. Both the core Project Components, and Ancillary Works and other Project Activities are identified. **Table 2** presents a summary of the Project Components and a description of the Physical Works and Activities that are likely to be undertaken as part of the project.

Table 1. Project Component Identification Table

Project Phase	Project Components	
	Core Project Components	*Ancillary Works, Other Projects & Activities*
Site Preparation	❖ Removal and Disposal of Existing Breakwater	
Construction	❖ Construction of a New Breakwater ❖ Construction of Aquatic Habitat (fisheries compensation)	❖ Construction of Temporary Land Based Ancillary Facilities may include the following: ➢ public viewing platforms ➢ pedestrian pathways ➢ vehicular and cycling movement infrastructure ➢ temporary public washrooms ➢ racing tower ➢ ambulance/first aid centre ➢ temporary relocation of the Martin-Goodman Trail
Operations / Modifications	❖ Maintenance of the New Breakwater and Watercourse Facility	
Decommissioning/ Abandonment	❖ Removal of New Breakwater	❖ Removal of Land Based Ancillary Facilities

Table 2. Project Component Description

Project Components	Physical Works and Activities	Description
Site Preparation Phase		
Removal of Existing Breakwater	➢ Break-up of existing concrete and timber crib	➢ Barges and/or other vessels will be used along with heavy machinery (i.e., hydraulic concrete breakers, cranes) to facilitate the break-up of the existing concrete structure into smaller pieces and removal of the wooden cribs. No blasting will be required to remove the existing breakwater.
	➢ Removal of waste materials	➢ The concrete pieces and wooden cribs will be transferred onto barges and removed from the site for disposal. The suitability of reusing any removed breakwater materials in the new breakwater will be reviewed in detail design. ➢ Some of the waste materials may be transferred directly from the barges to the disposal site (i.e., Leslie Street Spit), while other materials may require unloading onto the shore and transferral to trucks to be transported to an appropriate waste disposal site (no preservatives are present in the wood, so wood waste will not be considered contaminated). The land-based activities may involve heavy machinery located on shore (e.g., crane, excavator, dozer, trucks).
Construction Phase		
Construction of a New Breakwater	➢ Placement of materials forming the structure of the breakwater	➢ The breakwater design will involve the placement of quarried stone material of varying sizes directly into the lake. ➢ It has been proposed that the works be undertaken using marine-based construction, however, land-based construction may still occur. The detail design stage will determine the construction method. • Marine-based construction involves the use of cranes mounted on barges to place the stone material. Stone is delivered to the site by large barges towed by tugs. In some instances, self-unloading ships can be used to deliver larger quantities of material used as core material. The stone is then unloaded from the barge and placed directly into the works. The schedule of marine-based operations is dependent on weather conditions and allowance has to be made for downtime and standby charges during adverse weather. When weather conditions are favourable, construction activities can occur on a 24 hour per day, seven day per week basis. The marine-based approach permits the lowest structure. • With land-based construction, the material is delivered to the site by trucks. The crane for placing final armour sits on the structure. Land-based placement rates can be more economic than marine-based but typically larger volumes are required for the land-based approach because the structure needs to be higher and wider to ensure that the construction access and working platform is safely above the water level and wave action during construction. ➢ In-water activities may involve the use of barges and other such vessels to transport machinery and materials involved in the construction of the breakwater. Land-based activities are anticipated in all cases, including a receiving/staging/launching area, and the use of heavy equipment (i.e., crane).
	➢ Potential installation of electrical power to the breakwater	➢ It is not anticipated that there will be a need for electrical servicing to the breakwater. The navigational aids will likely be serviced by solar powered batteries.

Project Components	Physical Works and Activities	Description
Construction of Aquatic Habitat (fisheries compensation)	➢ Creation of habitat structures	➢ Implementation of habitat compensation will primarily be undertaken during the construction phase of the new breakwater and in accordance with the subsection 35(2) *Fisheries Act* Authorization. The compensation plan may include: • habitat incorporated into the new breakwater • creation of shoreline habitat (coastal wetlands, submerged habitat structures) or restoration of habitat at Marilyn Bell Park, Western Beaches, Ontario Place and/or Toronto Islands • potential gain of fish habitat through the removal of the existing breakwater. ➢ These activities will occur in the lake and in nearshore area. These activities will involve the use of machinery and vessels.
Construction of Land-Based Ancillary Facilities	➢ Construct temporary land-based ancillary facilities	➢ Temporary land-based facilities will include, but are not limited to, grandstands, washrooms, racing tower, etc. All of these facilities will be erected prior to the event and removed following the event returning the area to its pre-event condition. There will not be any permanent facilities constructed. ➢ Activities will largely involve the movement of trucks and other vehicles delivering materials and supplies to the side. Temporary structures may include tents, office trailers, portable toilets, etc.
	➢ Provide servicing for temporary land-based ancillary facilities	➢ The potential exists for temporary servicing to the land-based facilities during the event, such as water hoses, phone lines, and electrical supply). In all cases, these services will be installed temporarily and removed following the event such that the area is returned to its pre-event condition.
Operations / Modifications Phase		
Maintenance of the New Breakwater and Watercourse Facility	➢ Repair activities	➢ The shoreline of Lake Ontario is a harsh environment (e.g., wave action, abrasion by suspended sediment, ice forces, freezing and thawing) and maintenance of the armour stone rubblemound protection structure will be required. Repairs might include replacing displaced or cracked armour stones, repairing scour pads and backfilling washouts at the crest. Maintenance activities will be required from time to time in response to the deterioration or "wear and tear" of the structure.
Decommissioning / Abandonment Phase		
Removal of the New Breakwater	➢ Break-up of existing breakwater structure	➢ Removal of the new breakwater would involve the same activities as detailed for removal of the existing breakwater, except that no wooden debris would be present. However, with the long operational life of the breakwater, decommissioning of it is not anticipated in the foreseeable future.
Removal of the Land-Based Ancillary Facilities	➢ Removal of temporary land-based facilities	➢ As indicated above, all land-based facilities would be temporary. Therefore, removal of these facilities would be straightforward. The area would be returned to its pre-event condition.

These tables have been prepared in accordance with the guidance materials provided by Human Resources and Skills Development Canada (HRSDC) and the Canadian Environmental Assessment Agency, and the results of consultation with federal and provincial authorities. The project components presented below differ from those originally envisaged and presented in the Project Description and Scoping Report provided to the federal authorities. The changes are:

a) Lakebed Preparation for New Breakwater

This project component has been removed because the preferred project location does not require any alteration of the substrate.

b) Relocation or Modification of the Cowan Avenue Outfall

This project component has been removed because the preferred project location does not require the re-location or modification of this outfall.

c) Maintenance of Land-Based Facilities

This project component has been removed as only temporary facilities will be constructed that do not require maintenance.

2.2.3 Scope of the Assessment

The scope of the screening EA under the CEA Act will include all the factors identified in paragraphs 16(1) (*a*) to (*d*) of the CEA Act and, as provided for under paragraph 16(1) (*e*), any other matter that the RAs need considered. Paragraphs 16(1) *(a)* to (*d*) require that the following factors be included:

a) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

b) the significance of the effects referred to in paragraph (*a*);

c) comments from the public that are received in accordance with this Act and the regulations;

d) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and

e) any other matter relevant to the screening, such as the need for the project and alternatives to the project, that the Responsible Authority or, except in the case of a screening, the Minister after consulting with the responsible authority, may require to be considered.

3. Phase One: Identification and Description of the Problem / Opportunity

3.1 Award of the 2006 International Dragon Boat Federation Club Crew World Championships

As stated previously, construction of a new watercourse at the Western Beaches was a condition of the City's award to host the IDBF CCWC in 2006. Based on this need, the TWRC and TRCA initiated a feasibility study in 2004 for a multi-sport watercourse facility along the City's Western Beaches. After evaluating 11 options, a 650 m watercourse located in the Western Beaches, west of Ontario Place was identified as the preferred location.

The proposed new watercourse will be located immediately adjacent to the western boundary of Ontario Place, and has been designed to be approximately 135 m wide and 650 m long with a minimum depth of 2.5 m. The width and length have been developed based on the IDBF requirements for the CCWC. The overall watercourse width is based on six, 12 m wide racing lanes, with the remainder used as return lanes. The length is based on a course of 500 m with the remaining 150 m to be used for in-water staging prior to the start line and after the finish line.

Based on the overall dimensions of the new watercourse, it will be necessary to build a new breakwater farther out into the lake. As a result, portions of the existing breakwater will have to be removed in the area where the two overlap. In addition, due to the new watercourse location proposed in the feasibility study and the depth requirement for the IDBF CCWC event, the existing Cowan Avenue outfall would have to be modified or realigned.

3.2 Phase One Consultation Activities

3.2.1 Stakeholder Consultation Meetings

Initial project meetings were held on January 14 and 20, 2005, and February 28, 2005 with the Festival Development Chairperson, Toronto International Dragon Boat Race Festival, to discuss watercourse details, course specifications and the project in general. The Chair of the 2006 IDBF CCWC, was in attendance at the January 20, 2005 meeting to provide background information relating to the Bid for the CCWC, and an overview of the event itself.

A general stakeholder meeting was held on February 21, 2005 between the TWRC and the stakeholders potentially affected by the construction of a watercourse along the Western Beaches. The group included

representatives of the boating clubs (Argonaut Rowing Club, Boulevard Club, and the Toronto Sailing and Canoe Club), Ontario Place, Exhibition Place, and the sporting federations. The purpose of the meeting was to provide a project overview and discuss any project issues or concerns.

The results of this meeting were a better understanding of the issues facing the boat clubs and the desire to obtain a multi-purpose watercourse for all sports not just dragon boating. The TWRC and the City responded by stating that having a truly multi-purpose facility constructed is its objective as well, and therefore, many options had been reviewed and a detailed analysis undertaken as part of the feasibility study in order to achieve this objective. However available funding for the project prohibited constructing a watercourse larger than 650 m at this time, but did not preclude a future extension should additional funding be secured.

3.2.2 Agency Meetings

On February 15, 2005, a meeting was held between staff from the Ministry of Environment (MOE), the City, the TWRC, the TRCA, CEAA and the Consulting Team. The purpose of the meeting was to familiarize staff from the MOE with the project, to clarify the provincial EA requirements and to discuss the plan to prepare a co-ordinated EA document that would fulfill both the provincial and federal EA requirements. This meeting was followed by a second meeting on February 23, 2005 between staff from the CEAA, TC, DFO, EC, Toronto Port Authority, HRSDC, MNR, TRCA and the Consulting Team. The purpose of this meeting was to familiarize staff from the federal agencies with the project, to answer questions from the staff and for them to provide feedback on the information that they would expect to see in the submitted EA document.

3.3 Problem / Opportunity Statement

The area within the existing breakwater west of Ontario Place does not meet the minimum standards outlined by the IDBF for a CCWC race course and therefore would not allow the City to host the event. In order to meet the minimum IDBF requirements and host the CCWC, it is necessary to remove a portion of the existing breakwater west of Ontario Place and construct a new breakwater further from the shoreline. The Feasibility Study completed prior to initiation of this EA process identified a location immediately adjacent to the western boundary of the Ontario Place island for the new watercourse.

Therefore, the purpose of this project is provide a new watercourse to host the 2006 IDBF CCWC, which involves constructing a new breakwater and modifying or realigning the Cowan Avenue outfall.

4. Phase Two: Identification and Evaluation of Alternative Solutions to the Problem / Opportunity

Since a new breakwater is required and the Cowan Avenue outfall needs to be modified or realigned to accommodate the new breakwater, watercourse solutions were identified for both project components.

4.1 Identification and Description of the Alternative Breakwater Solutions

The following three alternative breakwater solutions were identified for evaluation based on the "Dragon Boat Course Feasibility Study - Final Report" and MEA's Municipal Class EA:

- **Alternative Breakwater Solution No. 1**: Do Nothing
- **Alternative Breakwater Solution No. 2:** Build a New Breakwater Connected to Ontario Place
- **Alternative Breakwater Solution No. 3:** Build a New Breakwater Not Connected to Ontario Place

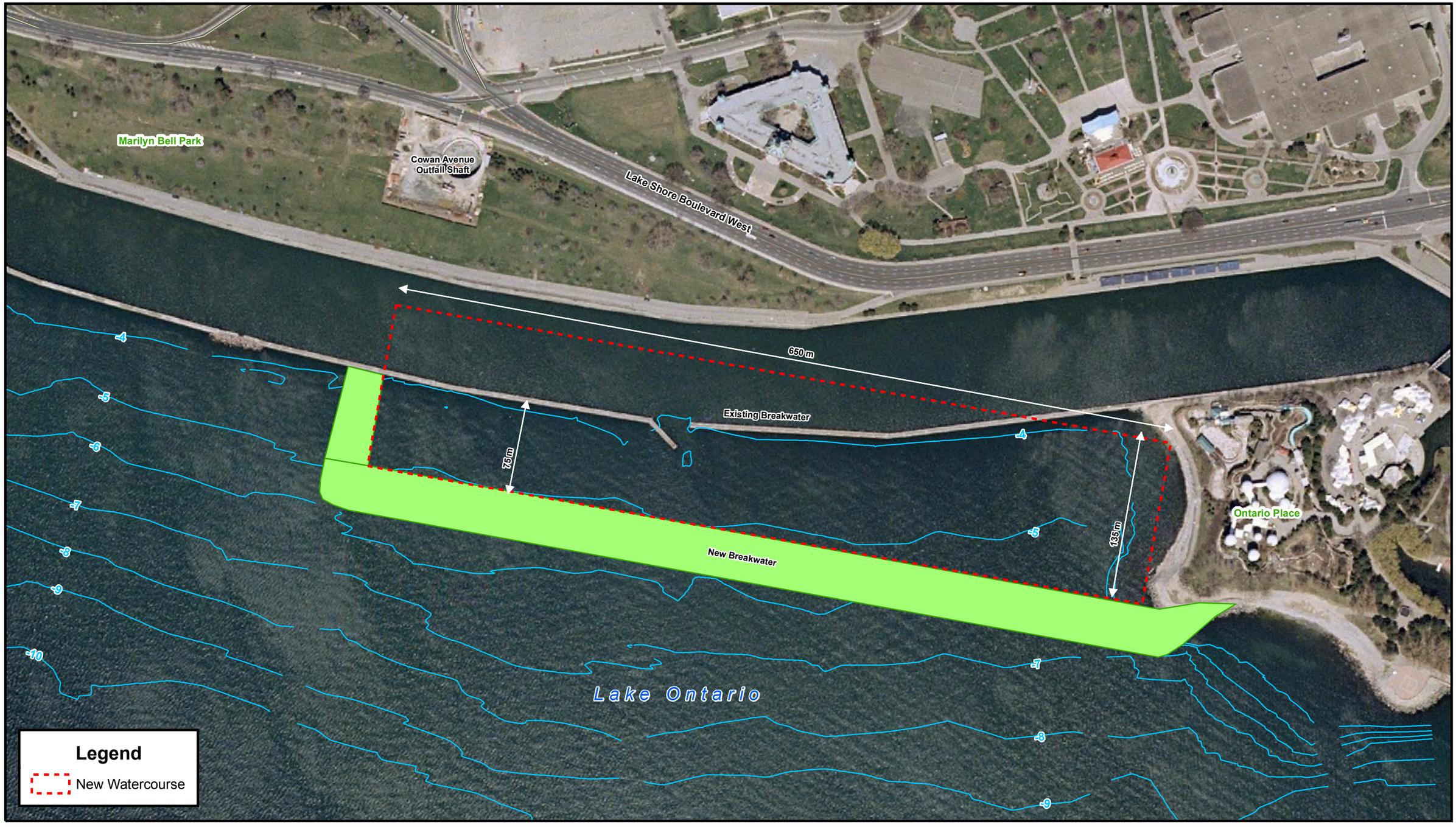
The following subsections briefly describe each of these alternative breakwater solutions.

4.1.1 Alternative Breakwater Solution No. 1 – Do Nothing

No new breakwater would be built and the existing breakwater would remain. Even though the "Do Nothing" alternative does not address the Problem / Opportunity Statement, the Municipal Class EA requires its consideration as a means of providing a benchmark for evaluating the other alternative solutions.

4.1.2 Alternative Breakwater Solution No. 2 – Build a New Breakwater Connected to Ontario Place

In this alternative, a new breakwater would be constructed immediately to the west of Ontario Place and connected to the existing shore of Ontario Place (see **Figure 3**). The western end of the new breakwater would be curved back to connect with the existing breakwater, and from this point eastwards, the existing breakwater would be removed.



Gartner Lee

MacViro

Baird

Alternate Breakwater Solution No. 2
Connected to Ontario Place

Western Beaches Watercourse EA

Project 50170, May 2005

100 50 0 100 m

Figure 3

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4.1.3 Alternative Breakwater Solution No. 3 – Build a New Breakwater Not Connected to Ontario Place

The new breakwater proposed for this alternative would be constructed in the same location as Alternative Solution No. 2. However, the eastern end of the breakwater would not be connected to Ontario Place, rather, it would be curved outwards to allow boat passage between the breakwater and the Ontario Place shoreline **(see Figure 4).** The western end of the new breakwater would be curved back to connect with the existing breakwater, and the existing breakwater in this section would be removed as in Alternative Solution No. 2.

4.2 Identification and Description of the Alternative Cowan Avenue Outfall Solutions

Three alternative solutions were developed in order to address the need to modify or realign the Cowan Avenue outfall:

- **Alternative Cowan Avenue Outfall Solution No. 1**: Do Nothing
- **Alternative Cowan Avenue Outfall Solution No. 2:** Maintain the Existing Outfall Alignment and Extend at Lower Depth
- **Alternative Cowan Avenue Outfall Solution No. 3:** Build a New Outfall on a New Alignment

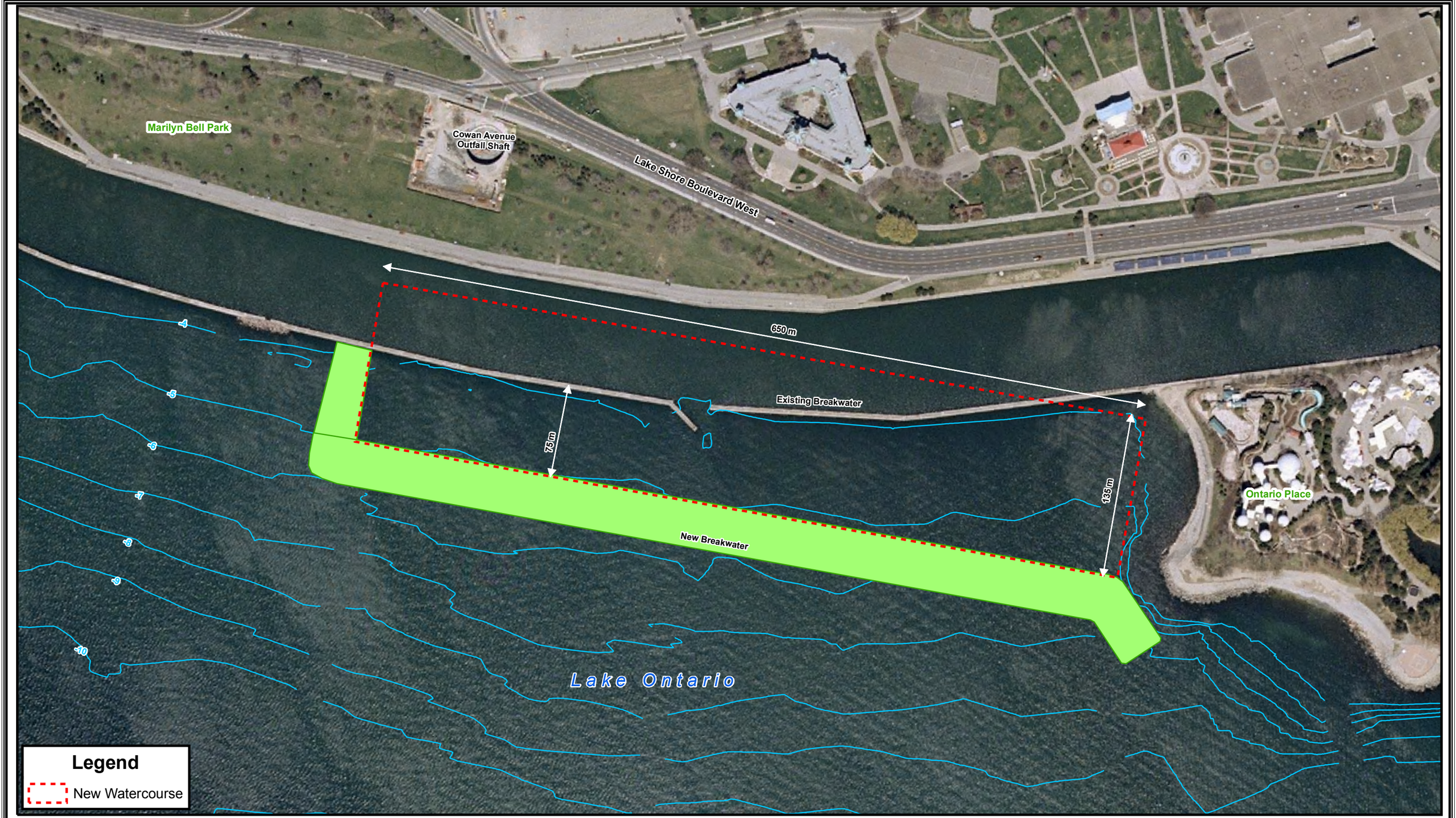
The following subsections briefly describe each of these alternative solutions.

4.2.1 Alternative Cowan Avenue Outfall Solution No. 1 – Do Nothing

The current Cowan Avenue outfall would remain in place as is without change.

4.2.2 Alternative Cowan Avenue Outfall Solution No. 2 – Maintain the Existing Outfall Alignment and Extend at Lower Depth

The current Cowan Avenue outfall extends just far enough to allow for discharge outside of the existing breakwater. However, with the removal of the existing breakwater and construction of a new breakwater farther from shore, the Cowan Avenue outfall would have to be extended in order to continue discharging outside of the breakwater and into the open lake. This alternative proposes following the same alignment as the existing outfall and extending to clear the new breakwater (**see Figure 5**). Additionally, in order to meet the depth requirements for the IDBF CCWC, the Cowan Avenue outfall would have to be lowered.



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Alternate Breakwater Solution No. 3
Not Connected to Ontario Place

Western Beaches Watercourse EA

Project 50170, May 2005

100 50 0 100 m

Figure 4

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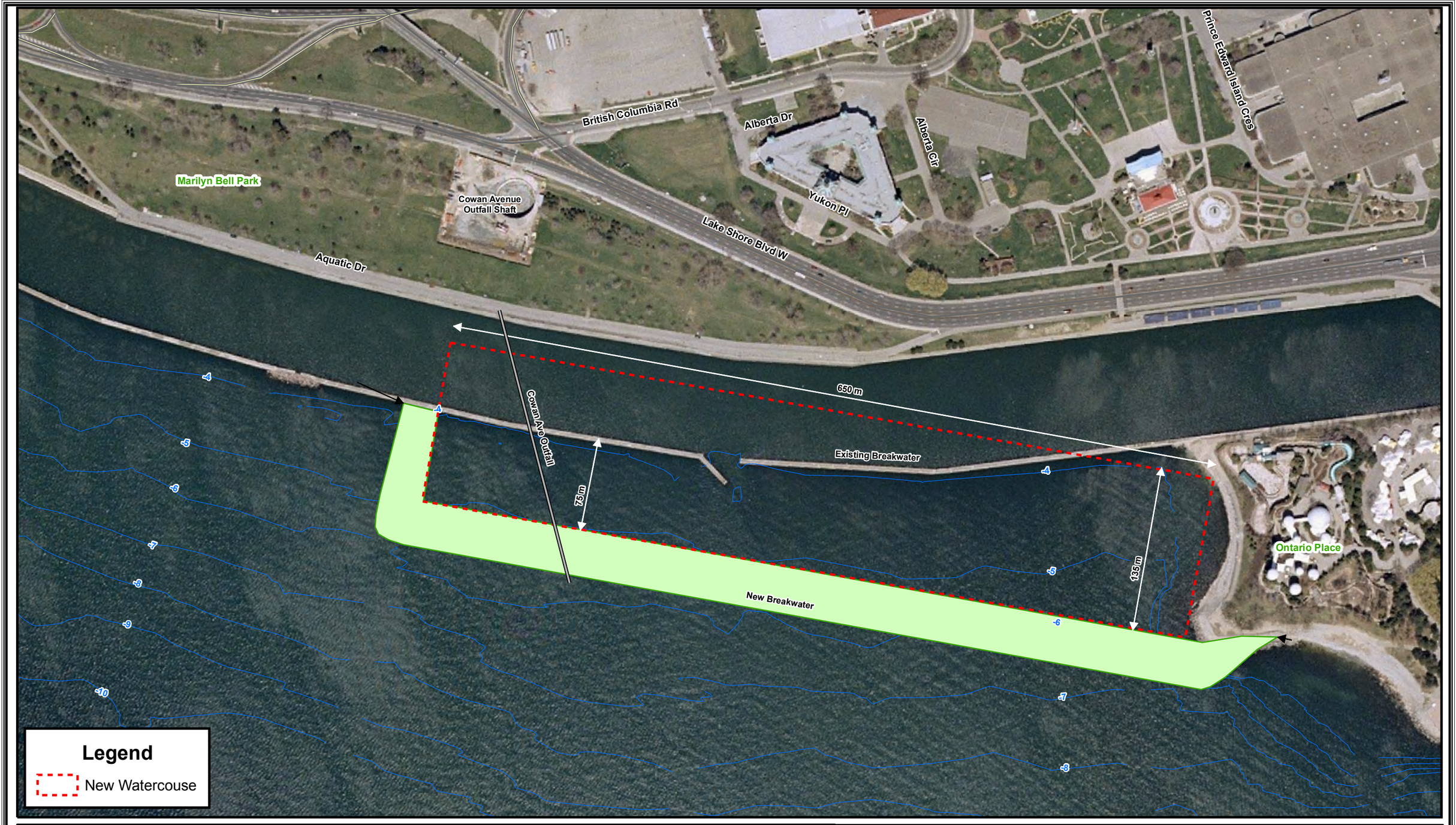

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Alternative Cowan Avenue Outfall Solution No. 2
Maintain the Existing Outfall Alignment and Extend at Lower Depth

Western Beaches Watercourse EA

Project 50170, May 2005

100 50 0 100 m

Figure 5

N W E S

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4.2.3 Alternative Cowan Avenue Outfall Solution No. 3 – Build a New Outfall on a New Alignment

In this alternative, the existing Cowan Avenue outfall would be re-aligned to avoid the new breakwater. This would involve constructing the new outfall west of the new breakwater so that discharge from the outfall would be outside the new and old breakwaters (**see Figure 6**).

4.3 Description of the Existing Environment

The existing environment described in the following sections is generally bounded by Ontario Place in the east, the near end of Humber Bay in the west, the Lakeshore Boulevard and the neighbourhoods of Parkdale and Swansea to the north and the Lake Ontario depth contour of approximately 10 m (approximately 400 m off-shore) to the south. These descriptions are based primarily on extensive secondary source information review supplemented by a number of field investigations.

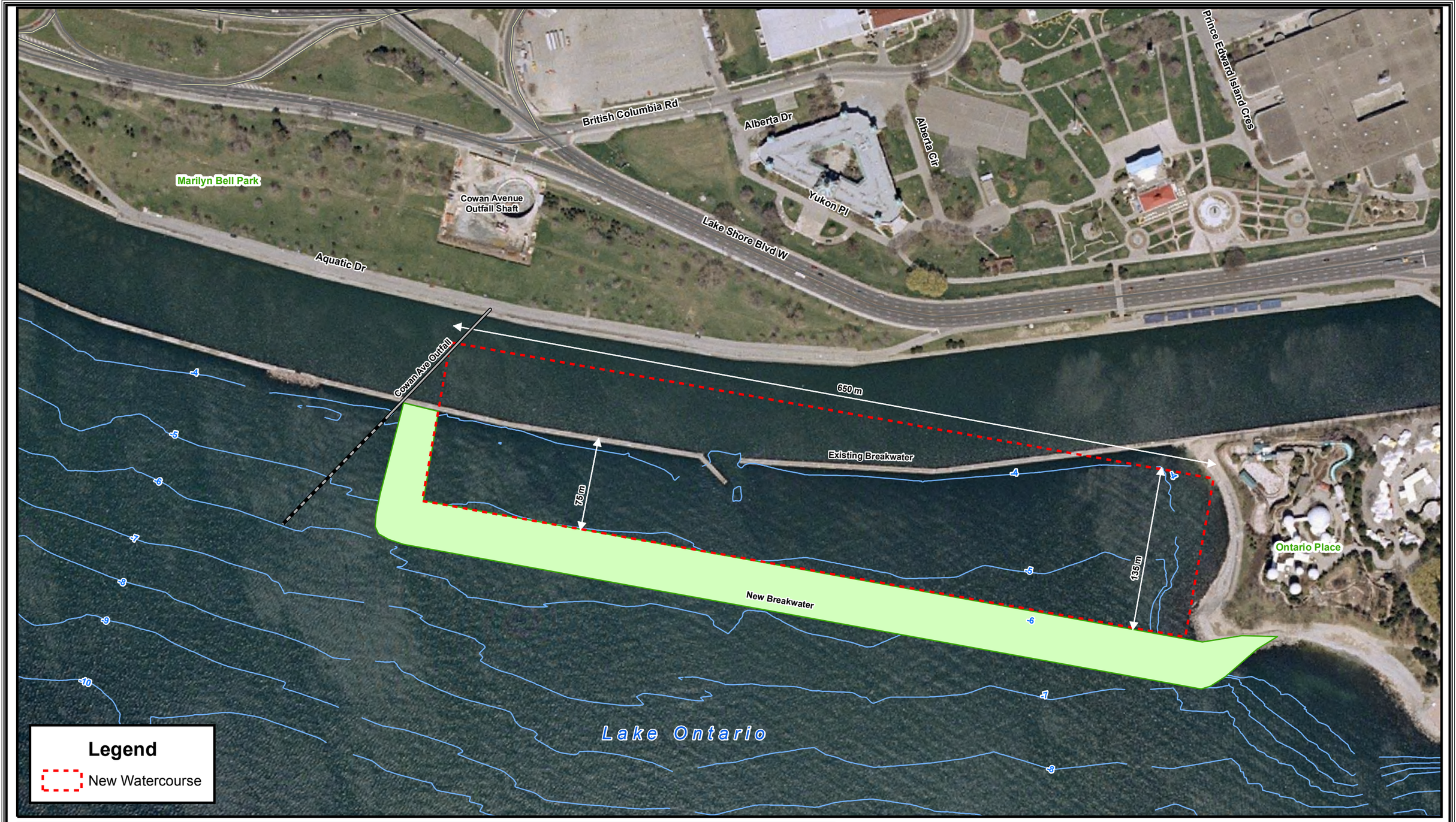
4.3.1 Coastal Processes

Shoreline

The shoreline between Humber Bay and Ontario Place consists of low glacial plain (Haras and Tsui, 1976). The embayed shore configuration is the result of the historic inundation of an ancient river valley. The shoreline has been significantly altered by lake filling (e.g., Grenadier Pond was once located at the shoreline) and substantially hardened by the construction of protection structures (e.g., revetments, vertical walls made of concrete and steel) along the entire mainland shoreline, and segmented offshore breakwaters along the entire shoreline from the Humber River to the Western Gap. The shoreline in the area of the new watercourse facility has been hardened by a vertical sea wall. Ontario Place, to the east of the site was constructed by lakefilling and also provides on essentially hardened shoreline around its perimeter. The sand beaches east of Humber Bay have been created by artificial fill (Haras and Tsui, 1976).

Lake Ontario Bathymetry

The nearshore area inside the existing breakwater is relatively shallow. A bathymetric survey of the project area undertaken by TRCA in November 2004 (see **Figure 7**) determined that the water depths between the shoreline and the existing breakwater typically vary from 1 m to 3 m below chart datum. Chart datum is 74.2 m International Great Lakes Datum (IGLD). Lakeward of the existing breakwater, the lakebed slopes downward at approximately 1:40 to the 10 m depth. At the location of the alternative breakwater solutions, the depth varies from 4.5 m to 7 m. From a depth of 10 m out to 20 m, the bottom slope is more gradual (approximately 1:100).



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Alternative Cowan Avenue Outfall Solution No. 3
Build a New Outfall on a New Alignment

Western Beaches Watercourse EA

Project 50170, May 2005

100 50 0 100 m

Figure 6

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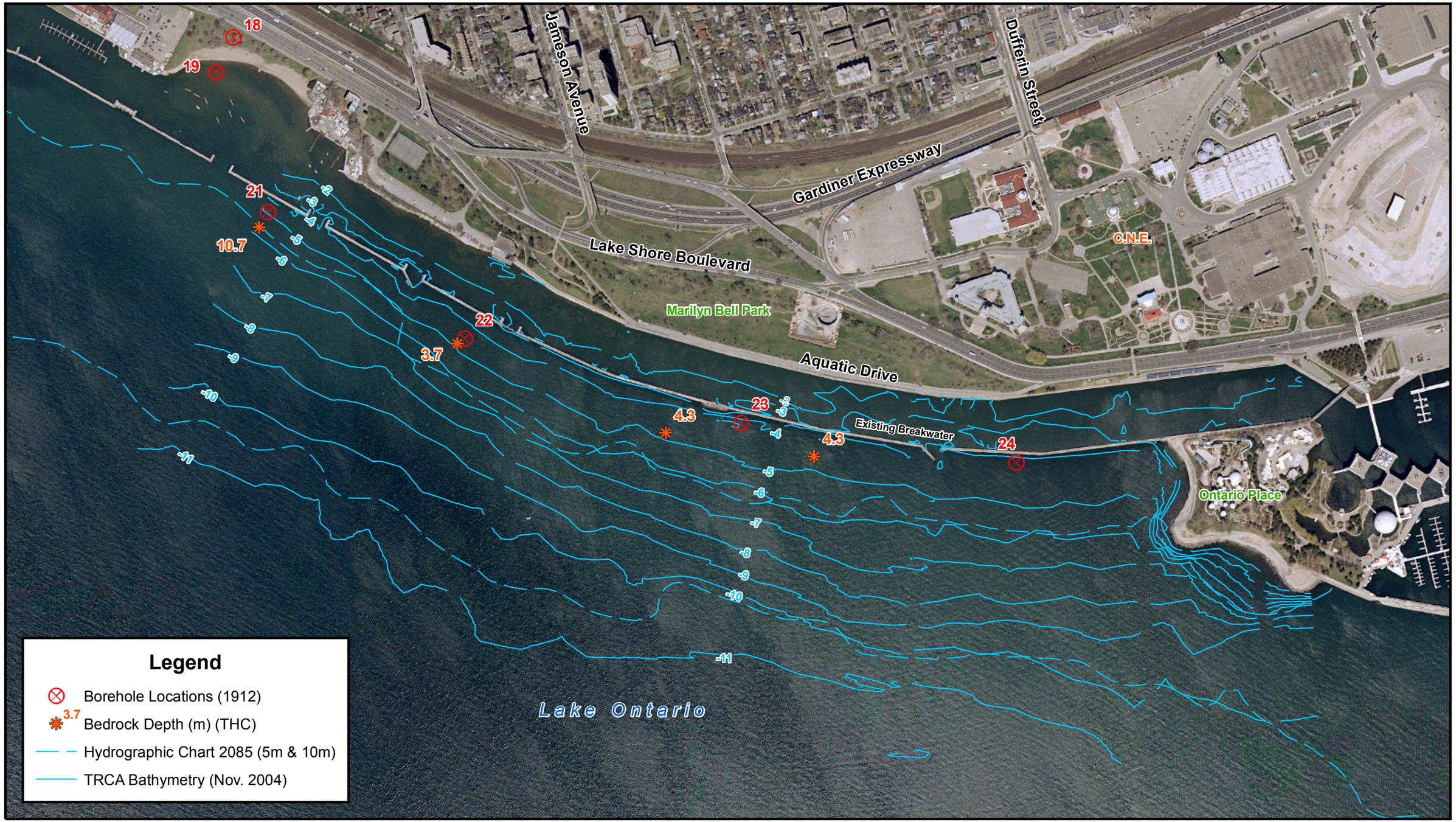

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Lakebed Bathymetry

Western Beaches Watercourse EA

Project 50170, May 2005

100 50 0 100 200 300 m

Figure 7

N W E S

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Additional published hydrographic data was taken from Canadian Hydrographic Services Chart 2085. The 5 m and 10 m contours are shown on **Figure 7.**

4.3.2 Terrain and Topography

The land adjacent to the proposed watercourse facility site consists of Marilyn Bell Park that is relatively flat at its eastern and with a gentle slope towards Lake Ontario, but rises more steeply towards its western end. The land use of this area consists of vegetated parkland with paved pedestrian paths.

4.3.3 Soils and Sediment

Soils

The soils in the Western Beaches area and beneath the Marilyn Bell Park consist of clayey silt to sandy silt till in the western portion. In the eastern portion of the park, the soils consist of land fill from land reclamation activities during the mid-20th century. The land fill ranges in thickness from 4.1 to 7.6 m and consists of a heterogeneous mixture of silty clay, clayey silt, sand, gravel, as well as asphalt, brick, and various debris and rubble (Geo-Canada, 1996). Beneath the fill or glacial till overburden is the dark grey shale of the Georgian Bay Formation.

Lakebed Sediment Composition and Stratigraphy

A geophysical survey completed in May 2005 at the location of the proposed breakwater identified the lakebed to consist of approximately 2 m of highly weathered and fractured shale over sound bedrock. The lakebed in the vicinity of the alternative breakwater solutions consists of mainly medium to large angular/sub-rounded boulder substrate with a thin veneer of coarse sand overlying bedrock (TRCA 2004). The presence of bedrock at or very near to the lakebed surface was corroborated by the following additional information:

a) boreholes shown on 1912 Toronto Harbour Commission (THC) plan;
b) depth to bedrock spot elevations shown on 1990 Toronto Harbour Commission map (refer to **Figure 7**);
c) seismic mapping (Lewis and Sly);
d) City of Toronto sewer outfall drawings at Dufferin and Roncesvalles; and
e) Western Beaches Tunnel geotechnical study.

The 1912 THC boreholes, shown on **Figure 7**, indicate that boreholes 22 through 24 consisted of 4 m to 4.5 m of water over bedrock. Further to the west, the depth to bedrock increases and there is overburden of “boulder clay”, sand and sand and silt.

Sediment Quality

The following parameters were tested for using the sediment samples collected by TRCA (2004):

1. Trace metals – lead, zinc, mercury, cadmium, copper, iron, manganese, nickel, arsenic.
2. Supplemented metals – antimony, barium, beryllium, chromium (total), chromium (VI), cobalt, molybdenum, selenium, silver, vanadium.
3. Polychlorinated biphenyls (PCB)/Organochlorine Pesticides.
4. Polyaromatic hydrocarbons (PAH).

Results of the laboratory analysis were compared against federal and provincial sediment quality guidelines. Antimony, Beryllium, Cadmium, Molybdenum, Selenium, Silver and Chromium (VI) had concentration below lab minimum detection limits (MDL). The remaining metal parameters were above lab minimum detection limits, but did not exceed sediment quality guidelines. PCB, Organochlorine pesticides and PAH results did not exceed minimum detection limits. The full sediment report is provided in **Appendix A**.

Sediment Processes

A littoral cell is defined as a self-contained coastal system, for which there is no transport of sediment into or out of the system. In examining sediment budget processes for the study area and the possible impacts of the proposed breakwater on the sediment budget, only the littoral cell within which the project is located is considered.

The project site is located in a littoral cell that stretches from Humber Bay to Gibraltar Point at Toronto Islands. There is virtually no transport into the littoral cell from the east. Numerical modelling described in Baird (1994), shows net sediment transport at Gibraltar Point to be towards the east. From Gibraltar Point to the Western Gap there is little net transport along the shore as it orientated towards the predominant southwesterly waves. Longshore drift that is moved westward from this area also confined by the navigation channel at the Western Gap and Ontario Place. The westerly portion of Humber Bay, to the west of the site is a depositional zone.

MNR's Littoral Cell Definition and Sediment Budget for Ontario's Great Lakes (MNR, 1988) states that this section of shoreline supports little actual longshore transport because:

a) the entire mainland shoreline is protected by offshore breakwaters and revetments, thus reducing any supply from shore erosion; and

b) there is no significant beach accumulation anywhere in the area.

The sand beaches east of Humber Bay have been created by artificial fill. It has been shown that the nearshore area is primarily devoid of any sediment accumulation lakeward of the existing breakwaters. The nearshore wave analysis indicates that the location of the breakwater is a nodal area within the littoral cell with potential transport towards the east due to southwesterly waves and towards the west under the influence of easterly waves.

4.3.4 Surface Water Quality and Quantity

Surface Water Quality

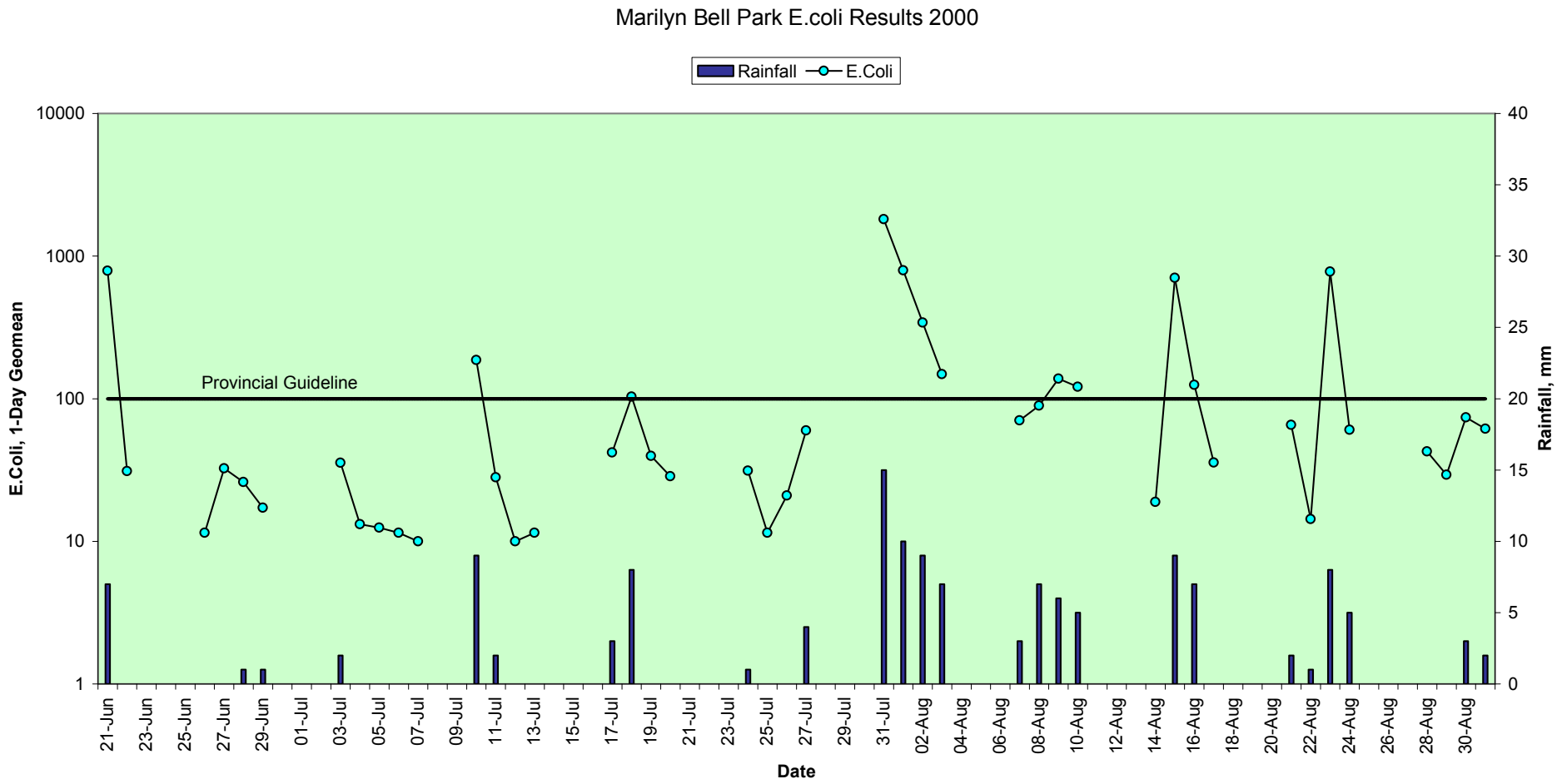
E. coli data routinely monitored by the City during the summer period were obtained to characterize surface water quality within the vicinity of the new watercourse. Data from sampling locations about the mid-point between the existing breakwater and the dockwall south of Marilyn Bell Park, from about the end of June to the end of August for the years 2000 to 2004 were available. The City has calculated a 1-day geometric mean from the samples taken at the five locations. This information has been plotted over the period of record for each of the five years along with the rainfall amount. These plots are shown in **Figures 8 to 12** from 2000 to 2004, respectively. The Provincial Guideline of 100 counts / 100 mL for *E. coli* is also indicated on these figures.

A review of this information shows close correlation between the occurrence of wet weather flow events and the elevated *E. coli* readings. During the periods when the *E. coli* exceeds the Provincial Guideline, the City posts "no swimming" signs in the area to warn the public. For the Boulevard Club area, it is estimated that the beach postings occur about 70% of the swimming season. The postings included those resulting from the "Rainfall Rule". This rule, developed by the City, required the placement of a sign on the beach which reads "WARNING – For 48 hours after a rainfall, this beach will be polluted. Swimming during this period will be hazardous to health".

The primary sources of contaminants include overflows from the Jameson Avenue outfall and nearby outfalls such as the Cowan Avenue outfall, near shore plume from the Humber River runoff, and the existence of waterfowl, notably geese and seagulls. Although these outfalls extend beyond the existing breakwater, the contaminants can migrate back towards the shore through gaps that exist in the breakwater to promote water circulation. With the implementation of the Western Beaches tunnel, the Jameson Avenue outfall will be used only if required during maintenance.

Surface Water Quantity

Lake Ontario water levels fluctuate over the long-term (i.e., years), seasonally, and in the short-term (i.e., hours).



MacViro Baird

Gartner Lee

Figure 8: Water Quality Characterization
Marilyn Bell Park 2000

Western Beaches Watercourse EA

Project 50170, May 2005

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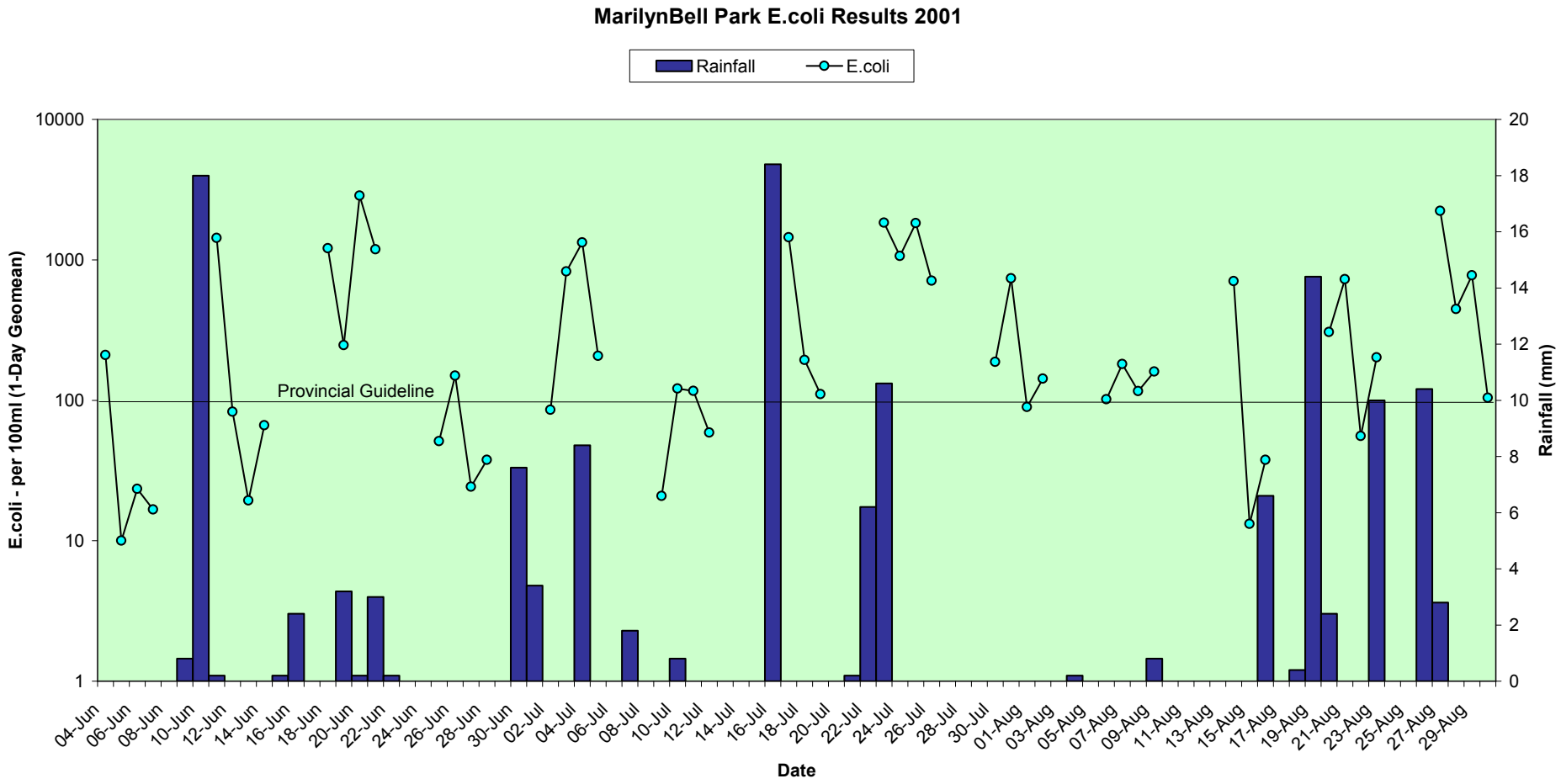

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Figure 9: Water Quality Characterization
Marilyn Bell Park 2001

Western Beaches Watercourse EA

Project 50170, May 2005

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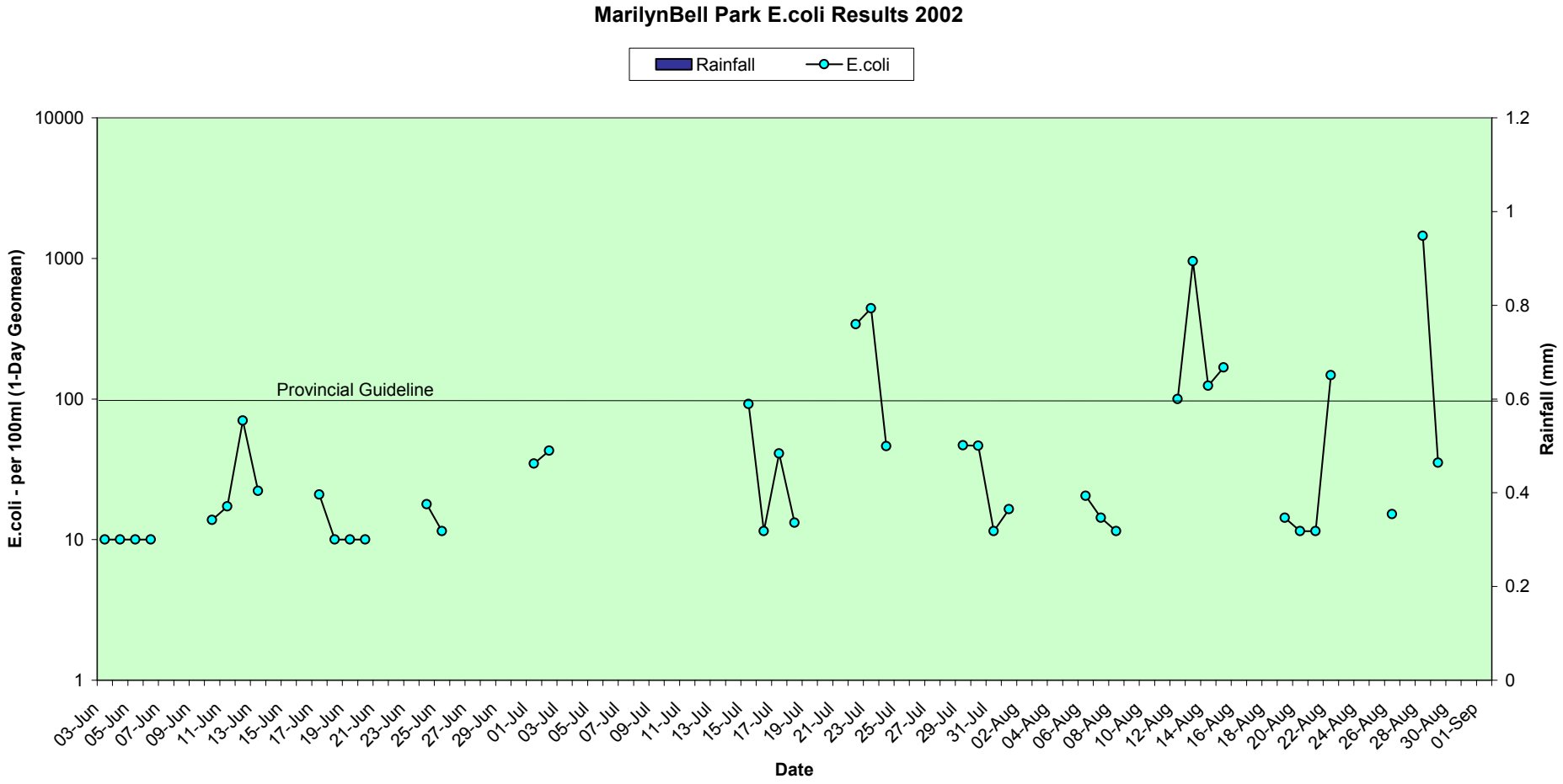

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Figure 10 : Water Quality Characterization
Marilyn Bell Park 2002

Western Beaches Watercourse EA

Project 50170, May 2005

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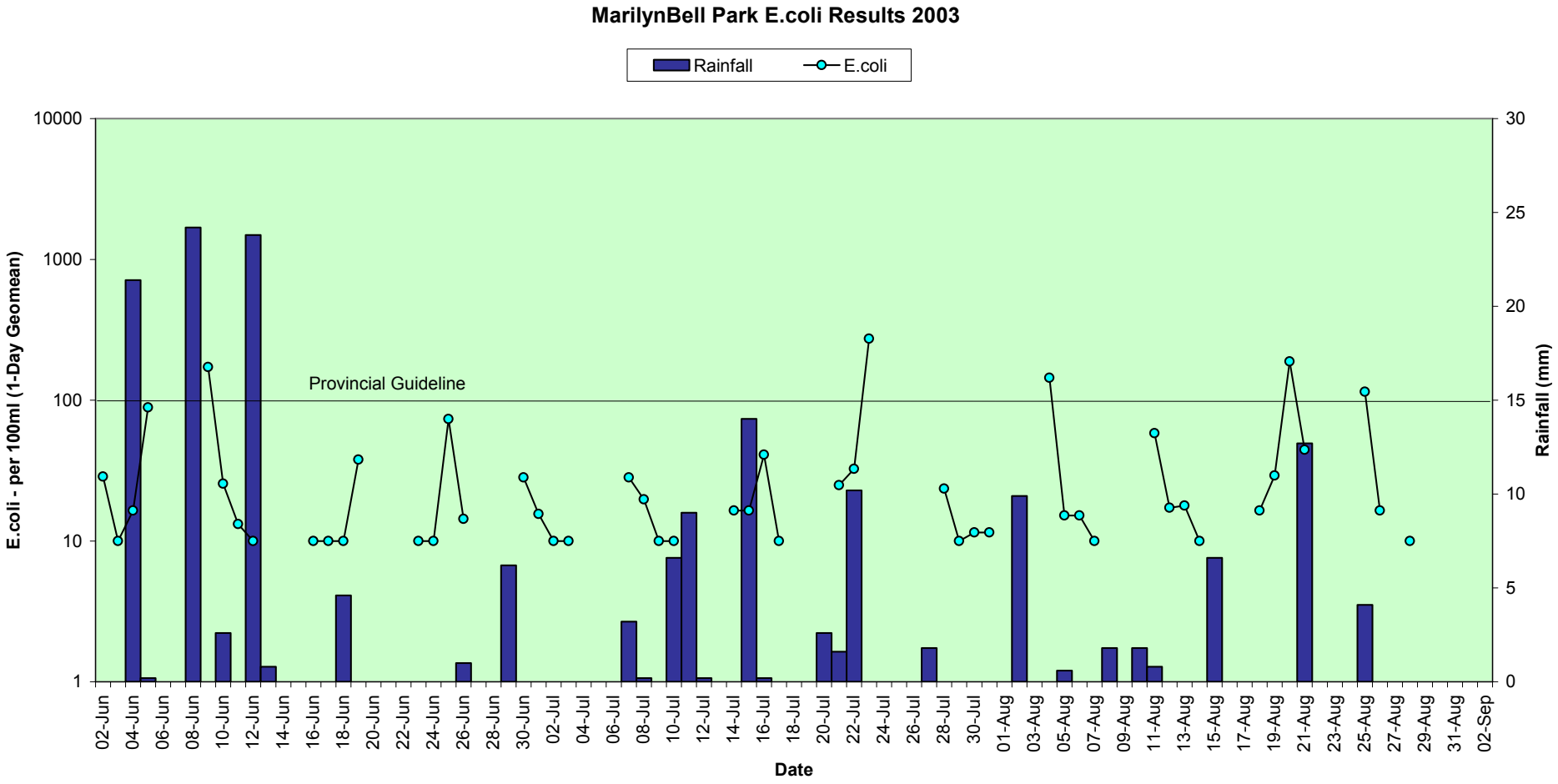

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Figure 11 : Water Quality Characterization
Marilyn Bell Park 2003

Western Beaches Watercourse EA

Project 50170, May 2005

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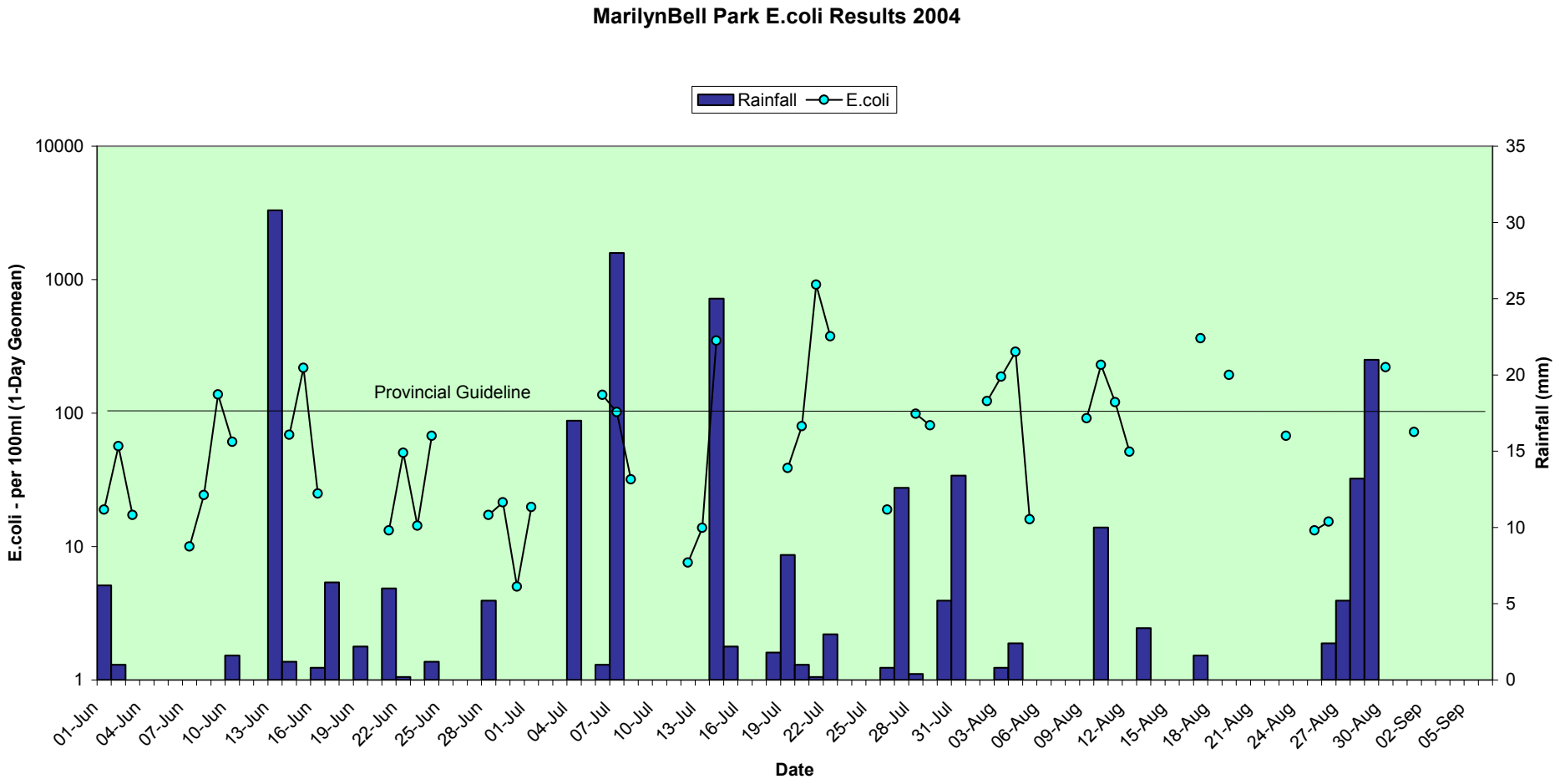

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Gartner Lee

Figure 12 : Water Quality Characterization
Marilyn Bell Park 2004

Western Beaches Watercourse EA

Project 50170, May 2005

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Long-Term and Seasonal Water Level Fluctuations

Monthly mean lake levels recorded from 1918 to 2001 are shown in **Figure 13**. The mean monthly Lake level has varied over a range of about 2.0 m (from elevation 73.75 m GSC (Geodetic Survey of Canada) to 75.75 m GSC). The average seasonal variation is from 74.5 m to 75.0 m. The fluctuation over any given year will vary. The water level typically peaks during June of each year. The lowest levels generally occur during December and January. The monthly mean level is often referred to as the "static" water level.

Precipitation, evaporation, runoff and outflow through the Niagara River from the upper Great Lakes are the main causes of long-term fluctuations and seasonal variations in the lake level. Snow and rain fall directly on the lake. Evaporation is greatest in the fall and early winter when the lake water is warm relative to the air temperature. The third natural factor is the run-off from the land area, or drainage basin, around the lake. Spring run-off results in the normal seasonal increase in water level during the spring and early summer.

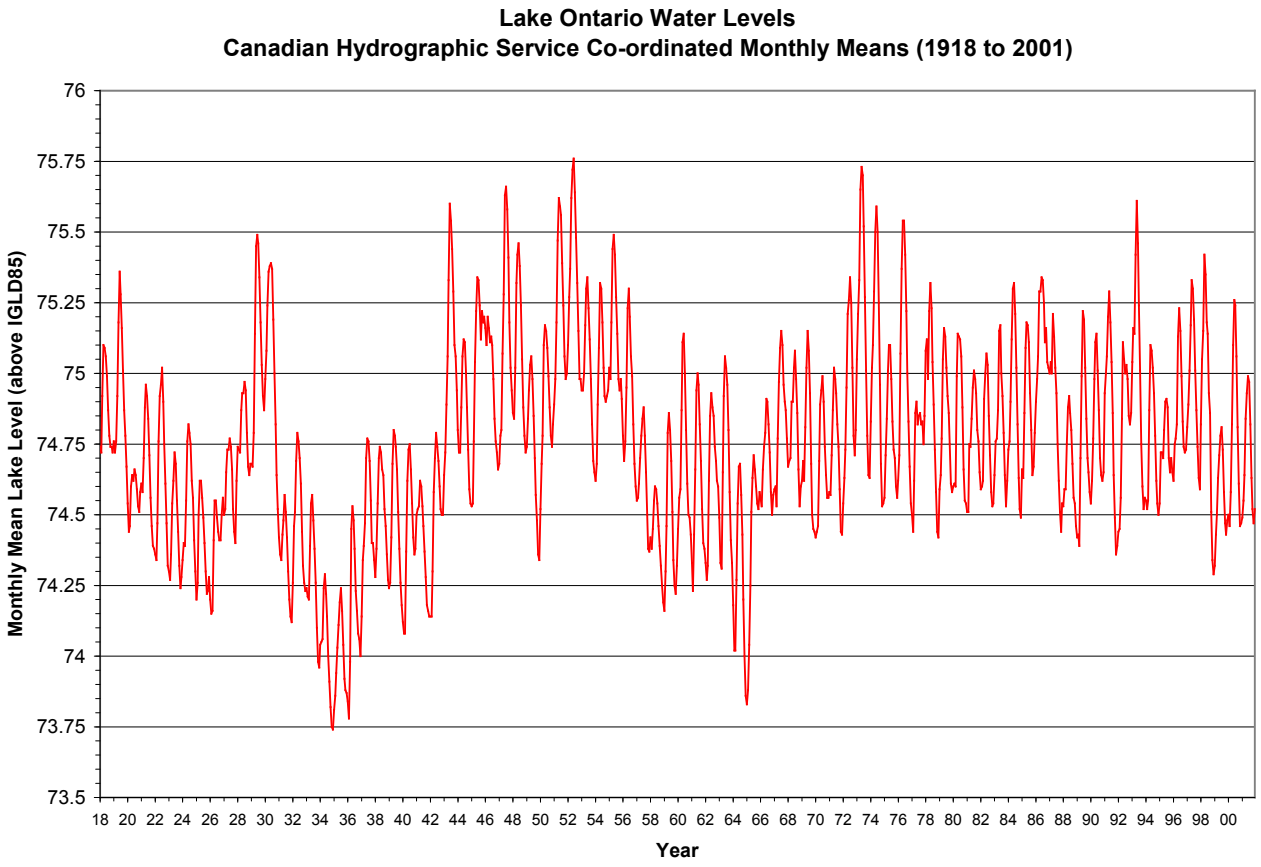
Water levels of Lake Ontario have also been regulated by dams at Cornwall, Ontario and Massena, New York as part of the St. Lawrence Seaway since 1958. The International Joint Commission (IJC) is a bi-national agency responsible for the equitable management of the boundary waters between Canada and the United States. As such, they supervise the management of the Moses-Saunders Power Dam on the St. Lawrence River in Cornwall, Ontario. The operation of the dam and the weekly releases are governed by the regulations in Plan 1958D. The weekly releases in turn influence the water levels of Lake Ontario in addition to the natural variability in supplies from the Niagara River.

The target operational range of Lake Ontario in Plan 1958D is 74.15 to 75.37 m. In other words, the IJC regulates the releases at the dam to maintain Lake Ontario levels in this 1.22 m range. During periods of extreme low and high supplies, it is not always possible to maintain lake levels in this range, as experienced during the low lake level conditions in 1964 and the high lake levels in 1973.

IJC is presently in the final year of a five-year study to develop a new regulation plan to govern the releases at the Moses-Saunders Power Dam and by extension influence the levels of Lake Ontario. New potential plans will be presented during a series of public meetings in the summer of 2005. At this time, it is uncertain whether a new plan will be adopted and if it is, whether the operational range will differ from 1958D. Man-made diversions on the Great Lakes (i.e., Ogoki-Long Lac, Chicago, Welland Canal) have also had a small net effect of raising the level of Lake Ontario by about 3 cm (Environment Canada 1989).

Short-Term Water Level Fluctuations

Short-term fluctuations are generally produced by the influence of the wind and, to a lesser extent, by changes in atmospheric pressure. Atmospheric pressure differences between the opposite sides or ends of lakes can produce fluctuations in water levels. However, the main cause of significant short-term lake-level fluctuations is strong winds blowing over the lake. When winds continue to blow over the lake surface in one direction for a number of hours, an increase in the water level against the downwind shoreline is produced, referred to as "wind setup" or "storm surge". A similar "wind setdown" is produced at the upwind end of the lake. Surges at Toronto are generally less than 0.2 m to 0.3 m.



MacViro Baird

Gartner Lee

Figure 13: Monthly Mean Lake Ontario Water Levels

Western Beaches Watercourse EA

Project 50170, May 2005

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Extreme Value Analysis of Water Levels

The accepted practice for estimating the return periods of monthly mean water levels over the next fifty years is to consider the historic levels while taking regulation effects into account. This necessitates the use of either: (1) a relatively short-term period of record since regulation (1960 onwards); or (2) the long-term record since 1900 but adjusted to account for the effects of regulation. The adjusted long-term record is referred to as the "Basis of Comparison" (BOC) data.

One of the difficulties in undertaking an extreme value analysis of mean monthly water levels is that peak static water levels are correlated in time, varying not only seasonally but also on time scale of years. That is due to the storage capacity of the Great Lakes relative to the lake outflows. Annual peak water levels are not simply dependant on precipitation over the basin but also on water level in the previous year. Thus the maximum monthly water level in one year is not a true, independent event. Generally, it has been assumed that if a sufficiently long data series is employed that the annual water levels will not significantly affect the results.

Hourly water level data from 1962 to 2001 were analyzed in order to estimate extreme high water levels as a function of return period. Storm surge events were separated out from the hourly water level records and the annual maximum average monthly water level was determined from the data. An extreme value analysis was completed to estimate the maximum monthly mean, surge and combined water level (surge plus monthly) as a function of return period. The results are shown in **Table 3** for the full year and peak season (May 1 to Oct. 31). The 100-year return period level has a 1% probability of occurring in any given year, or on average, occur once every 100 years.

Table 3. High Water Levels as a Function of Return Period (m IGLD 1985)

Period	Water Level	Return Period (Years)				
		5	*10*	*25*	*50*	*100*
Full Year	*Static*	75.34	75.47	75.62	75.73	75.84
	Surge	0.20	0.22	0.24	0.25	0.26
	Combined	75.51	75.64	75.78	75.89	75.99
Peak Season	*Static*	75.34	75.46	75.59	75.68	75.76
	Surge	0.15	0.17	0.19	0.20	0.21
	Combined	75.47	75.58	75.71	75.80	75.87

Note: IGLD – International Great Lakes Datum

A similar analysis was undertaken to estimate extreme low water levels as a function of return period. The results are shown in **Table 4** for the full year and peak season (May 1 to October 31).

Table 4. Low Water Levels as a Function of Return Period (m IGLD 1985)

Period	Water Level	Return Period (Years)				
		5	*10*	*25*	*50*	*100*
Full Year	*Static*	74.34	74.24	74.09	73.97	73.85
	Surge	-0.23	-0.26	-0.30	-0.33	-0.36
	Combined	74.14	74.03	73.91	73.81	73.71
Peak Season	*Static*	74.52	74.47	74.41	74.38	74.35
	Surge	-0.16	-0.18	-0.21	-0.22	-0.25
	Combined	74.38	74.32	74.26	74.23	74.19

Note: IGLD – International Great Lakes Datum

The MNR determined the 100-year return period highest annual monthly mean levels for Lake Ontario to be 75.59 m IGLD based on the BOC data set from 1900 to 1987 (MNR 1989). The MNR (1989) estimates of the 100-year storm surge and the 100-year combined static and surge level at Toronto were 0.34 m and 75.74 m respectively. It is important to note that in developing the combined probability analysis for static lake level and storm surge that it is implicitly assumed that these two phenomena are independent and occur randomly throughout time. This is not actually the case as most of the severe surge events tend to occur in the December to April time frame (the time of highest winds over the lake) while peak annual static water levels tend to occur in May to July. This implies that there may be some degree of conservatism in the predicted 100-year combined static and surge water level.

The water levels reported above do not include the additional effects of wave setup and wave action at the shoreline (e.g., run-up, overtopping, spray).

Waves

A comprehensive and calibrated/verified wave climate database was used to provide an hourly estimate of the wave conditions (height, period and direction) in deep water at locations throughout the lake site for the 40-year period, 1961-2000. A summary of the deepwater significant wave heights at a point offshore of the new watercourse is presented in **Figure 14**. The significant wave height represents the average of the highest one-third of all waves in the wave train. The 10% wave height (only 10% of waves are greater) is 1.27 Hs (significant wave height) and the maximum wave height can be 1.8 to 2 times Hs.

West Wave Point - WAVAD 2 554 - Untransformed

Western Beaches Watercourse

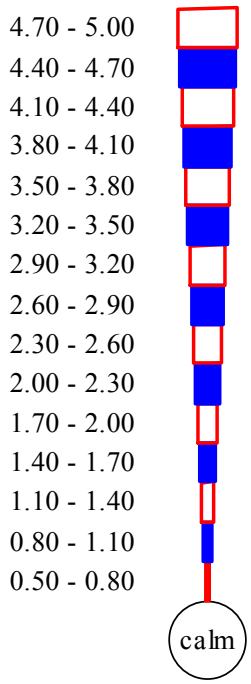
Current Time Interval:

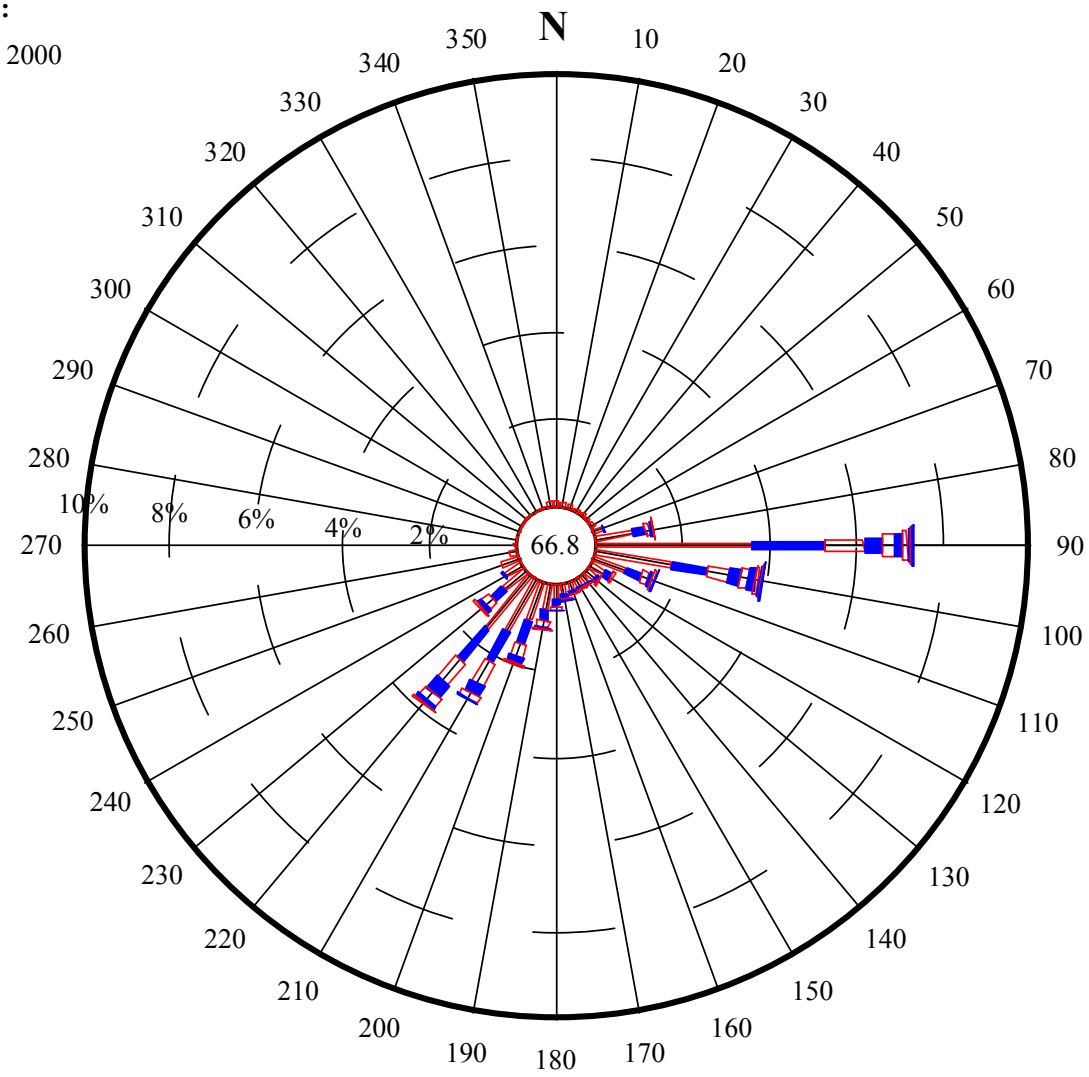
01 Jan, 1961 to 31 Dec, 2000

Season Selection:

All

Wave Height (m)





MacViro Baird

Gartner Lee

Figure 14: Deep Water Wave Heights

Western Beaches Watercourse EA

Project 50170, May 2005

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As waves move from the deep water offshore into the shallower nearshore region, their direction changes so that the wave crests tend to align themselves more parallel to the shore. This is known as refraction. The amount of refraction, or change in angle, depends on the wavelength and water depth. Refraction may increase or decrease the wave height at shore locations (by focusing the waves together or by spreading them out) as well as change the wave direction. In addition to wave refraction effects, the shape of the wave changes significantly as the wave moves into shallow water. Generally, the length of the wave decreases and the height increases. This process is known as shoaling. Some reduction in the wave height may also result from energy loss caused by the roughness of the lake bottom (i.e., friction) in shallow water. Wave breaking will occur as the water depth decreases closer to shore.

The deepwater waves were transformed to nearshore waves using wave models. The deepwater waves were transformed to a nearshore scenario in a two-step process. First the MIKE21 Nearshore Wave Model was used to numerically transform the deepwater waves to a depth of 10 m. From the 10 m depth to the 6 m depth, which is the depth of the proposed breakwater) the wave transformation was based on linear wave theory and the breaking wave heights on Goda's methodology (2000) and included the hourly water level records.

Output from the models included an estimate of the wave height, period and direction at the location of the alternative breakwater solutions (depth of 6 m below chart datum). The frequency of occurrence of the transformed nearshore wave heights from the various compass directions are summarized as a wave rose in **Figure 15**. The time series below the rose indicates the quality of the data coverage (i.e., gaps in the coverage due to missing data; for example "100%" represents no gaps in the data).

The "stormy season" (when severe wave conditions and storm surge are more likely to occur) generally extends from October through to April. From May to August the probability of severe storms occurring is reduced. A statistical analysis of the transformed waves was undertaken for "year-round", May to October and June to September conditions using a "peak over threshold" (POT) approach.

Ice

The formation of ice during winter months affects shoreline processes in two ways. The formation of shorefast ice, in combination with an "ice foot", protects the shoreline area from wave action even when the main body of the lake is relatively ice-free. The second factor is that ice formed within the greater water body has the effect of reducing wave generation during winter months.

On Lake Ontario, ice usually originates, and is most prevalent at the east end of the lake next to the entrance to the St. Lawrence River. However, in cold winters it is not uncommon for ice cover to extend west along the north shore of the lake, where it may occasionally affect Humber Bay. Three such extreme events occurred in the winters of 1973, 1979, and 1994. However, when it does occasionally develop, the ice cover is not very thick and the ice foot is usually less than 2 m deep.

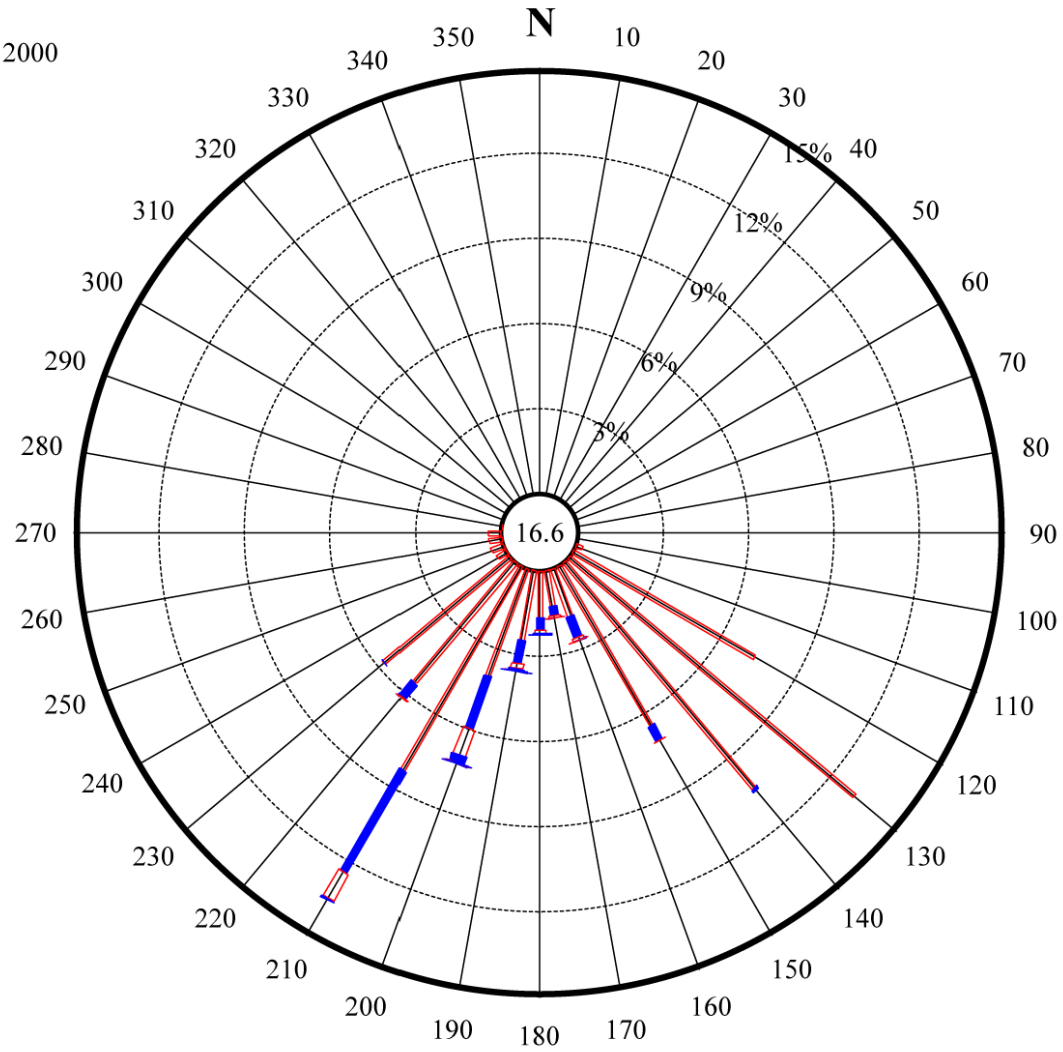
Wave Height Rose at Middle of Proposed Breakwater
1962-2000

Current Time Interval:

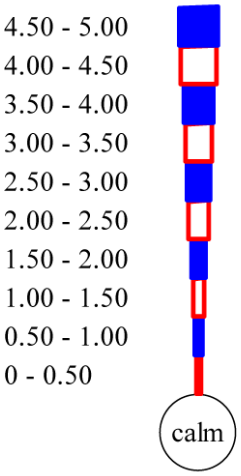
01 Jan, 1962 to 31 Dec, 2000

Season Selection:

All



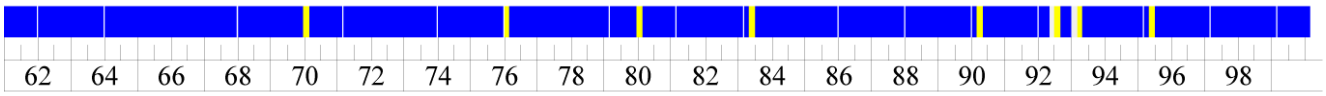
Wave Height (m)



Time Series Legend:

Equal or < 90 % | Between 90 and 100 % | 100 %

Minimum Scale Rate: 2 months



MacViro Baird

Gartner Lee

Figure 15: Wave Rose

Western Beaches Watercourse EA

Project 50170, May 2005

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4.3.5 Groundwater Quality and Quantity

A geotechnical baseline investigation for the Western Beaches tunnel (Geo-Canada, 1996) conducted soil, bedrock, and groundwater investigations within this area. The groundwater elevations measured during this investigation indicated that the groundwater flow is toward Lake Ontario in both the overburden and bedrock units. The hydraulic conductivity of the bedrock decreased with depth from $3.1x10^{-6}$ m/s to less than 10^{-8} m/s and was determined using packing tests. No hydraulic tests were conducted in the fill or till overburden. The closest groundwater user is located at least 2.5 km west of Marilyn Bell Park.

The quality of the groundwater was only analysed in the deeper bedrock monitoring wells. The groundwater samples were analysed for inorganic parameters listed under the Metropolitan Sewer By-Law #153-89 Sanitary Sewer and Storm Sewer. The groundwater samples met all the criteria except for pH under Sanitary Sewer criteria (pH of 11.67, above the 10.5 maximum allowable level), and zinc under the Storm Sewer criteria (zinc of 0.14 mg/L, above the 0.01 mg/L maximum allowable level).

4.3.6 Wildlife Habitat

The combination of the urban landscape matrix and manicured parkland, urban influences (i.e., noise, traffic, etc.) and the hardened shoreline limit the wildlife potential of the area. Marilyn Bell Park provides minimal wildlife habitat value beyond support for the most urban-tolerant species including Grey Squirrel (*Sciurus carolinensis*) and European Starling (*Sturnus vulgaris*).

The Lake Ontario shoreline has been reinforced with a raised steel sheet pile wall that creates a vertical difference in water to land elevation of greater than 1 m. The hardened shoreline restricts the movement of wildlife, shorebirds and especially amphibians from land to water and vice versa. No amphibian species were identified during field investigations in March 2005.

4.3.7 Species at Risk

Significant species are based on rarity rankings at the national, provincial and regional level (for bird and plant species). National rarity was assigned according to rankings assigned by the Committee on the Status of Endangered Wildlife (Species at Risk are listed in five categories: Special Concern, Threatened, Endangered, Extirpated, and Extinct). Provincially significant species are those ranked S1 (extremely rare) to S3 (rare to uncommon) by the MNR. Regional rarity for bird species was based on Ontario Breeding Bird Atlas rankings (OBBA 2005); plant species were based on to Varga *et al.* (2000).

The following agencies and databases were consulted to determine the presence of significant species in the vicinity of the new watercourse:

a) Bird Studies Canada (BSC) – Denis Lepage, Senior Scientist. Pers. comm., 2005;
b) Ontario Breeding Bird Atlas (OBBA) – database quarry, 2005;
c) Natural Heritage Information Centre (NHIC) – database quarry, 2005; and
d) Toronto and Region Conservation Authority (TRCA) – Gord McPherson, Supervisor of Ecological Services. Pers. comm., 2005.

NHIC reports the occurrence of 10 species of provincially significant wildlife within 2 km of the study area. Nine of the ten significant species reported are historical records (greater than 50 years old), including six dragonflies and damselflies, two butterflies and one breeding bird. The remaining element occurrence is a 1979 record of the Black-crowned Night-heron (*Nycticorax nycticorax*). This species requires well structured vegetation communities to support nesting habitat, including forest, scrub and marsh habitats. Appropriate breeding habitat is not found in the vicinity of the new watercourse. Section 4.3.9 provides Species at Risk information as it specifically relates to breeding birds.

4.3.8 Vegetation and Wetlands

As illustrated in **Figure 16**, the Lake Ontario shoreline is designated as part of the City's Natural Heritage System to the east and west of the new watercourse (City of Toronto, 2002). The Natural Heritage System designation includes a number of parkland and open space land uses, including lands associated with Marilyn Bell Park, Budapest Park and Sunnyside Park. The natural heritage features associated with these parklands are highly fragmented and typically designed to support recreational activities. The Lake Ontario shoreline supports a number of vegetation communities with more significant ecological functions, including High Park and Humber Bay to the west, and Tommy Thompson Park located approximately 8 km to the east. No Environmentally Significant Areas (ESA) or Areas of Natural and Scientific Interest (ANSI) were identified in the vicinity of the new watercourse.

Marilyn Bell Park is the primary terrestrial feature in the vicinity of the new watercourse and is the proposed area for the temporary land-based facilities for the CCWC event. For this reason, the park was the focus of the vegetation assessment although Ontario Place and other shoreline areas were included.

Marilyn Bell Park is an elliptically shaped park that is wedged between Lake Shore Boulevard to the north and Lake Ontario to the south. The park is 130 m at its widest point and is 2400 m in length. The area of the park is approximately 12.3 ha. The park is designed to support a variety of recreational activities, including picnic areas and approximately 2.4 km of the Martin Goodman Trail. The south edge of the park is a paved zone 18.5 m wide ending at the hardened shoreline of Lake Ontario. Shoreline vegetation is absent because of this treatment. North of the paved zone is manicured parkland that features a mowed ground layer and open grown trees. A summary of the terrestrial features is presented in **Figure 16**.

Gartner Lee

MacViro

Baird

Existing Natural Enviromnment Conditions

Western Beaches Watercourse EA

Project 50170, May 2005

0 260 520 1,040 Meters

Figure 16

1:14,000

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Young, mid-age and mature trees are well represented, however most trees are with the 20 to 50 cm dbh size class (diameter at breast height, measured at 1.4 m above the ground). Tree taxa are dominated by non-native, urban-tolerant species commonly planted as ornamental specimens. Dominant species include Norway Maple (*Acer platanoides*), Siberian Elm (*Ulmus pumila*) and Austrian Pine (*Pinus nigra*). Ecological functions of Marilyn Bell Park are associated with the "urban functions" of trees such as improvements to air quality, heat sinks, surface water runoff, etc.

4.3.9 Migratory Birds

The Lake Ontario shoreline provides staging habitat for migratory birds. Shoreline habitats typically support high concentrations of birds during migration season. Migratory birds either follow the shorelines along their migration route, or use the shoreline as a resting area before and after crossing large bodies of water. Marilyn Bell Park and the Argonaut Rowing Club provide the best staging habitat for terrestrial songbirds in the area, however these parklands are manicured and would not support a diversity of migrating songbirds. Terrestrial song birds typically demonstrate preference for larger shoreline parklands and well-developed vegetation layers. More suitable habitat is present at a number of locations within a few kilometres of the new watercourse including Toronto Island, Tommy Thompson Park, High Park and the mouth of the Humber River.

Off-shore portions of the area provide staging habitat for migrating waterfowl. These species concentrate in the calm water located between the existing breakwater and the Lake Ontario shoreline. Similar sheltered and calm water habitat is present along the Lake Ontario shoreline, including Toronto Island and Tommy Thompson Park to the immediate east, and Humber Park to the west.

Breeding Birds

The new watercourse is located within Region 12, Square 17PJ23 of the Ontario Breeding Bird Atlas (2005). (Records in the OBBA are organized in a grid of 10 km by 10 km squares). The OBBA reports 2 Species at Risk, 7 provincially significant and 3 regionally significant breeding bird species in square 17PJ23, including 6 confirmed breeders, 3 probable breeders and 4 species observed during breeding season **(Table 5)**. The OBBA includes the most current records of all species reported by other sources reviewed. The OBBA reports two additional regionally significant observations that pre-date 2001: California Gull (*Larus californicus*) and Red Crossbill (*Laxia curvirostra*). The OBBA confirms that none of these species breed in the vicinity of the new watercourse with two possible exceptions: Great Black-backed Gull and Caspian Tern.

Table 5. Significant Breeding Birds in 17PJ23 (OBBA 2005

Common Name	Scientific Name	Status				
		COSEWIC (national)	COSSARO (provincial)	Provincial breeding season SRANK	Regional Status (OBBA)	Breeding Evidence
Red-necked Grebe	*Podiceps grisegena*			S1		OB
Great Egret	*Ardea albus*			S2		CO
Black-crowned Night-Heron	*Nycticorax nycticorax*			S3		CO
Green-winged Teal	*Anas crecca*				Rare	PR
American Wigeon	*Anas americana*				Rare	OB
Canvasback	*Aythya valisineria*			S1		CO
Redhead	*Aythya americana*			S2		PR
Lesser Scaup	*Aythya affinis*				Rare	OB
Peregrine Falcon	*Falco peregrinus*	THR	END	S2S3		CO
California Gull*	*Larus californicus**				Rare	CO
Great Black-backed Gull	*Larus marinus*			S2		CO
Caspian Tern	*Sterna caspia*			S3		CO
Short-eared Owl	*Asio flammeus*	SC		S3S4		OB
Red-headed Woodpecker	*Melanerpes erythrocephalus*	SC	VUL	S3		PR
Red Crossbill*	*Loxia curvirostra**				Rare	PO

END = Endangered, **THR** = Threatened, **SC** = Special Concern, **VUL** = Vulnerable

S1 = Extremely rare, **S2** = Very Rare, **S3** = rare to uncommon, **S4** = common

OB = Observed, **PO** = Possible, **PR** = Probable, **CO** = Confirmed

***** Record pre-dates 2001.

OBBA breeding records of the provincially significant Great Black-backed Gull and Caspian Tern are from Tommy Thompson park, located greater than 6 km from the new watercourse. The existing breakwater provides potential habitat for breeding colonies of common shorebirds, but has never supported Great Black-backed Gull or Caspian Tern (Lepage pers. comm. 2005).

Records of significant species identified through secondary sources are likely associated with riparian areas of the Humber River (located approximately 4 km to the west of the new watercourse) and breeding bird colonies of Toronto Island (located approximately 1.5 km east of the new watercourse).

4.3.10 Fish and Fish Habitat

The aquatic habitat from immediately west of Ontario Place to east of the Humber River is comprised of sheltered embayment and open coast, within and beyond the existing breakwater, respectively (see **Figure 16**). Sampling programs conducted along the Toronto waterfront from 1995-2002 by the MNR and TRCA have focused on this area and a comprehensive overview of fish communities and habitat was available.

Sheltered Embayment

Inside the existing breakwater, the sheltered embayment environment provides warm thermal conditions and refuge from waves. The substrate consists mainly of small to medium diameter angular/sub-rounded boulder/cobble with a thin veneer of silty sand. The substrate composition was difficult to discern due to the density of zebra/quagga mussels collected during the sediment sampling (TRCA 2004).

The area inside the breakwater is densely vegetated with Eurasian water milfoil (*Myriophyllum spicatum*) (70%), Common waterweed (*Elodea canadensis*) (20%) and Richardson's pondweed (*Potamogeton richardsonii*) (10%). Eurasian water milfoil was introduced to Ontario and is considered an invasive species. It is an aggressive weed that forms dense mats of vegetation on the surface of the water. The rapid growth rate of this species allows it to cover the water surface and displace native vegetation.

Milfoil begins to grow early in the spring and its density can reduce light penetration often shading out other plants. Milfoil is eaten by some species of waterfowl but is not considered to be a good source of food.

Embayments are separated from the open lake and provide a thermal refuge for resident warmwater fish species (Strus 1994). With few exceptions, most Lake Ontario fish spend at least part of their life cycle in the nearshore zone. The nearshore food web is a complex association of phytoplankton, zooplankton, benthic invertebrates and mostly smaller fish.

The majority of the Lake Ontario shoreline has been reinforced with a raised steel sheet pile wall for erosion protection. This wall creates a vertical difference in water to land elevation of greater than 1 m in some places rather than a gradual sloping beach common to natural shoreline in other parts of Lake Ontario. Because of the hardened shoreline, there is very little natural shoreline habitat for fish and other aquatic organisms.

The resident fish community inhabiting the nearshore zone varies with season, the degree of nutrient enrichment, temperature and available habitat. Fish species previously caught within the breakwater, close to the study site, include: northern pike (*Esox lucius)*, white sucker (*Catostomus commersonii)*, gizzard shad (*Dorosoma cepedianum)*, alewife (*Alosa pseudoharengus)*, yellow perch (*Perca flavescens*), rock bass (*Ambloplites rupestris*), johnny darter (*Etheostoma nigrum*), largemouth bass (*Micropterus salmoides*) and goldfish (*Carassius auratus*).

zIn addition, brown bullhead (*Ameiurus nebulosus*), spottail shiner (*Notropis hudsonius*) and three-spine stickleback (*Gasterosteus aculeatus*) have been found within the breakwater, further west of the study site (TRCA 2002a). Sampling in 2002 by TRCA within the nearby Ontario Place embayments resulted in the capture of five species including (alewife (*Alosa pseudoharengus*), bluntnose minnow (*Pimephales promelas*), brown bullhead (*Ameiurus nebulosus*), emerald shiner (*Notropis atherinoides*) and northern pike (*Esox lucius*).

With the exception of the bluntnose minnow and the emerald shiner, the remaining species have been previously caught in and around the proposed site of the Western Beaches Watercourse. Both the bluntnose minnow and the emerald shiner are common to southern Ontario. The bluntnose minnow is a tolerant warmwater fish species which is commonly used as a bait fish. The emerald shiner is considered to be intermediate in tolerance and their populations are known to fluctuate widely from year to year (Eakins 2005).

Surveys of the inner Ontario Place embayments in 1992 and 1994 resulted in the capture of 12 species, all of which are common to the Greater Toronto Area (MNR 1992 & 1994). None of these species are considered sensitive (i.e., intolerant) to disturbance and none are classified as species of concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or the Committee on Species at Risk in Ontario (COSSARO). Results of the sampling programs are summarized in **Table 6**.

Table 6. Fish Species Caught In and Around the Proposed Western Beaches Watercourse

	Sheltered Embayment						**Open Coast**	
	Inside Breakwater *Within Study Limits*		**Inside Breakwater** *West of Study Site*		**Ontario Place Embayments** *East of Study Site Ontario Place*		**Outside Breakwater** *East of Study Site*	
	Oct-93	*Jul-90*	*Oct-93*	*Jul-99*	*July 92&94*	*May-02*	*Oct-94*	*May-02*
Alewife		X	X		X	X		
black crappie					X			
Bluegill					X			
bluntnose minnow						X		X
brown bullhead				X	X	X		
brown Trout							X	
common carp					X	X		
emerald shiner						X		
gizzard Shad		X						
Goldenshiner					X			
Goldfish	X		X					
johnny darter	X			X				
largemouth bass	X		X	X	X			
longnose dace			X					
mottled sculpin							X	
northern pike		X			X	X		
Pumpkinseed				X	X			
rock bass		X	X	X	X		X	
smallmouth bass							X	
spottail shiner			X					X
threespine stickleback				X				
white sucker		X		X	X		X	
yellow perch		X			X			

Open Coast

Outside the breakwater is considered to be open coast habitat. This area has colder water and is exposed to wind and wave action. The substrate consists of mainly medium to large angular/sub-rounded boulder substrate with a thin veneer of coarse sand overlying bedrock. Again, the precise composition of the substrate was difficult to determine due to the high densities of zebra/quagga mussels present. Plant life is limited due to the depth of the water as light cannot penetrate to the bottom.

Fish species previously caught in the open waters near the breakwater and Ontario Place include: bluntnose minnow (*Pimephales promelas*), brown bullhead (*Ameiurus nebulosus*), three-spined stickleback (*Gasterosteus aculeatus*), white sucker (*Catostomus commersonii)*, small mouth bass (*Micropterus dolomieu*), rock bass (*Ambloplites rupestris*), mottled sculpin (*Cottus bairdii*), brown trout (*Salmo trutta*) (TRCA 2002).

The same sampling program by TRCA in 2002 included open coast habitat and resulted in the capture of only two species in that environment. These were bluntnose minnow and three-spine stickleback (*Gasterosteus aculeatus*). This lack of results was probably at least partially due to the fall sampling season when many common species have left the area. None of the above species are classified as species of concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or the Committee on Species at Risk in Ontario (COSSARO). Results of these sampling programs are summarized in **Table 6**.

Historically, open coast shorelines provided habitats suitable for spawning coldwater fishes. As the open coast area of the lake is separated from the shore by the breakwater, most of the shoreline no longer serves as a spawning area for coldwater lake fish. The open coast nearshore habitat just outside the breakwater is also used extensively by warmwater fish species for migration between warm water areas such as Humber Park's wetlands and the Ontario Place complex. This migration occurs primarily during the remittent summer conditions when the water inside the breakwater undergoes substantial warming.

This corridor allows for colonization and replenishment of secondary habitats from these primary warm water production zones. Extended calm weather conditions maximize the function of the open coast near shore warm water corridor. Mid-summer heating of the surface waters of Lake Ontario produces thermal stratification and helps facilitate the near shore migration of warmwater fish between warmwater refuges (TRCA 2002b).

4.3.11 Air Quality and Climate Change

Background air quality levels in the study area are influenced by local and long-range (cross border) contaminants generated in upwind urban areas a number of industrial and commercial pollutant sources. Air quality in southern Ontario is affected in part by emissions from the United States, which contribute

approximately 50% of the ground-level ozone, with the remaining 50% due to fossil fuel combustion in Canada and vehicle emissions. Until May 2005 a major source of pollutants in the Western Beaches area was Ontario Power Generation's Lakeview Generating Station to the west. However, this station has been recently shutdown. Currently, the dominant local source of pollutant emissions in the Western Beaches is vehicle traffic on the Gardiner Expressway and Lake Shore Boulevard. In particular, elevated levels of carbon monoxide (CO) and total suspended particulates (TSP) prevail. Other contributors to the pollutant levels include marine activity such as the Island ferries and various recreation and commercial vessels. No substantial industrial air pollution sources are present within the study area.

There are no reliable estimates of the impact of climate change on geographic areas as small as the Western Beaches, however climate change studies that use General Circulation Models (GCMs) on a global or continental scale, have led to some preliminary conclusions regarding the effect of greenhouse gas-induced climatic change for the Southern Ontario-Great Lakes Basin region over the next several decades. These include:

a) temperatures could increase in the range of 3°C to 9°C, resulting in a shortened snowfall season and an earlier snowmelt/spring runoff;
b) annual precipitation changes are somewhat inconclusive, with estimates ranging from -20% to +40%;
c) drier summers and wetter winters are likely;
d) greater lake evaporation, resulting in decreased lake levels, on the order of 1 m or so are possible; and
e) the frequency of severe events is expected to increase with a warming climate.

4.3.12 Noise and Vibration

The noise and vibration environment in the Western Beaches area is dominated by the noise and movement of vehicle movements along the Gardiner Expressway and Lakeshore Boulevard, the rail lines, as well as a general urban hum. Closer to Lake Ontario and within Marilyn Bell Park, the sound of waves breaking along the hardened shoreline and off-shore pleasure craft can be heard. In general, the vicinity of the new watercourse can perhaps be described as a "Class 1 Area" according to the Ontario Model Municipal Control Noise By-Law, that is, "*…an area with an acoustical environment typical of a major population center where the background sound level is dominated by the urban hum*".

The Ontario Model Municipal Control Noise By-Law defines "point of reception" or receptor as any point in the premises of a person where sound or vibration originating from other than those premises is received. Based on existing aerial photography, the closest receptors to the proposed site are likely to be overnight boaters at Ontario Place marina (750 m to the east), local residents north of the Gardiner Expressway (500 m to the north). The nearest hospital, the St. Joseph Health Centre, is located at 30 The Queensway (1,600 m to the west).

4.3.13 Local Economy

As described in more detail below, the economic activity in the Western Beaches area is related to the recreational and tourism venues and event related activities. Ontario Place and Exhibition Place provide permanent venues for commercial, retail and arts and entertainment business activity. These venues also offer event space which support a wide variety of recreational, business, marketing and cultural events on a single or recurring basis. In addition to these established venues, special events hosted by the private and non profit clubs or on public space at Marilyn Bell Park support temporary commercial activities.

The nearest mixed land use area which supports a diversified local economy is Parkdale (Ward 14), north of the Gardiner Expressway. The labourforce / employment data for Ward 14 reveals employment is largely in manufacturing, and professional, scientific and technical services. These activities account for 12.5% and 13.1% of employment respectively. Employment in accommodation and food services account for 8.6%, while information and cultural services, arts, entertainment and recreation together account for 10.1%. Although data is not readily available, it is anticipated that these latter economic activities may have some connection to the shoreline recreational/venue related activity.

4.3.14 Tourism and Recreation

Tourism and recreation are important components of Toronto's economy. Toronto's tourism receipts reached $7.3 billion in 2003. These tourism receipts generated $5.2 billion of Gross Domestic Product (GDP) in Toronto, $2.9 billion in labour income and 84,811 jobs. A total of $2.4 billion of taxes were generated for all levels of government. Toronto's tourism receipts also generated impacts in other parts of Ontario as shown in the table below. Together, the impacts retained within Toronto and those generated in other parts of Ontario constitute the economic impacts of Toronto tourism receipts for the province of Ontario (Ontario Ministry of Tourism and Recreation, 2005).

Tourism and recreation activities in the Western Beaches area are concentrated along the waterfront. Residents and visitors alike use the areas parks, beaches and trails south of Lakeshore Road for a variety of tourist and recreational purposes. Many of the rowing and sailing clubs that make their home along the shoreline rely on the breakwater for their existence. For example, the Toronto Sailing and Canoe Club uses the shelter of the breakwater to maintain boat moorings between the shoreline and the breakwater. Additional details regarding recreational boating activities is provided in subsequent sections of this report. Although there are many tourist features along the waterfront, the key features in the Western Beaches area relevant to this project are:

a) Marilyn Bell Park;
b) Martin Goodman Trail;
c) Ontario Place;
d) Exhibition Place / National Trade Centre;
e) The Argonaut Rowing Club (ARC);
f) The Toronto Sailing and Canoe Club (TSCC); and
g) The Boulevard Club.

These tourism and recreational features have been identified in **Figure 17** and are described briefly below:

a) Marilyn Bell Park

Marilyn Bell, at the age of sixteen, became the first person to swim across Lake Ontario from New York State. The park was renamed in her honour on August 16, 1984, the 30th anniversary of her swim.

As mentioned, Marilyn Bell Park follows the shoreline of Lake Ontario just west of Exhibition Place. It is a long, thin, elliptically shaped park owned and managed by the City of Toronto. It is wedged between Lake Shore Boulevard to the north and the Lake Ontario edge to the south as shown in **Figure 17**. The maximum depth of the park is approximately 130 m, and its total length is 2,400 m. The area of the park is approximately 12.3 ha.

There are essentially no amenities such as washrooms, lighting, benches, phones, or picnic facilities situated in the park. Other than offering facilities for rugby, soccer and tennis, the park supports relatively passive uses. There are two paved pedestrian routes within the park. One path runs directly adjacent to Lake Shore Boulevard, and the second path – the Martin Goodman Trail, part of the Metropolitan Waterfront Trail network – is part of the asphalt roadway that runs directly along the water's edge.

A north-south pedestrian route connecting to the city neighbourhoods presently exists in the western area of the park. This route extends from the foot of Jameson Avenue across a pedestrian bridge over Lake Shore Boulevard, connecting to Marilyn Bell Park. Past the east edge of the park, a wooden bridge travels over Lake Shore Boulevard, connecting a narrow ribbon of land (approximately 26 m wide) to Exhibition Place.

Marilyn Bell Park can be entered by vehicle at the west entrance on Lake Shore Boulevard West. Public transit to the park includes the Dufferin 29 bus and King 504 streetcar. Pedestrians and cyclists can reach this destination along the Martin Goodman Trail.

b) Martin Goodman Trail

The City of Toronto has over 175 km of biking trails, the best of which is the 22 km path along the waterfront, known as the Martin Goodman Trail. The wide paved path more than adequately accommodates the many walkers, joggers, bikers, and roller-bladders that share the space. The trail completely traverses Marilyn Bell park from east to west.

Gartner Lee

MacViro

Baird

Existing Social / Cultural Environment

Western Beaches Watercourse EA

Figure 17

Project 50170, May 2005

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Map Document: (N:\Projects\2005\50170\2005\Final\GISSpatial\50170_Marilyn_bell_park_and_landuse_fig11.mxd) 17/05/2005 -- 2:08:25 PM

c) Ontario Place

Ontario Place is an internationally acclaimed cultural, leisure and entertainment parkland. The complex extends throughout three man-made islands along the Lake Ontario waterfront that are connected by bridges and walkways and contain restaurants, stores, an IMAX theatre and two marinas. The marina on the north side of the island complex has access to the open lake along the shoreline and through an opening in the existing breakwater to the west. The second marina is located on the south side of the island complex and has direct access to the open lake.

The marina on the north side of Ontario Place is a 280 slip marina with mooring facilities for boats up to 27.5 m in length. Slips are available on a daily, monthly and seasonal basis. The Ontario Place Marina is open from the first Saturday in May through to Thanksgiving Day (mid-October).

d) Exhibition Place / National Trade Centre

Exhibition Place is a unique site consisting of approximately 192 acres of parkland with many historical buildings that are owned by the City, as well as the National Trade Centre. Exhibition Place is located directly across Lake Shore Boulevard from Ontario Place. Exhibition Place is venue to more than 100 special events and trade and consumer shows annually. These events include the 129-year-old Canadian National Exhibition, the Royal Agricultural Winter Fair, and the Molson Indy car race, as well as the CHIN Picnic and annual Caribana Parade, and the Toronto International Boat Show, to name only a very few.

More than 4.5 million visitors frequent Exhibition Place annually; 1.8 million of which are generated through the trade and consumer show activities of the National Trade Centre. The National Trade Centre is a state–of–the–art trade and consumer show facility, that is the largest of its kind in Canada and the third-largest in North America.

More than 7,400 parking spaces are situated in lots throughout the site, including 1,300 parking spaces in the underground garage at the National Trade Centre.

e) The Argonaut Rowing Club (ARC)

Founded in 1872, the ARC is one of Canada's oldest and largest clubs. Located on the Western Beaches of Toronto to the west of Marilyn Bell Park, it offers rowing facilities for novice and experienced rowers.

As a not-for-profit organization, the ARC is run by volunteers, with no year-round full time staff. ARC is governed by a Board of Directors and supported by various committees. The corporation's by-laws set out the rules for operation.

f) The Toronto Sailing and Canoe Club (TSCC)

The TSCC is one of Toronto's oldest and best known sailing clubs. It was founded in 1880 as the Toronto Canoe Club and is located west of the ARC at the foot of Jamieson Avenue on 3 acres of land. The TSCC is a non-profit, volunteer-run sailing club with approximately 280 members. The club maintains 10 moorings at the existing breakwater.

g) The Boulevard Club

The Boulevard Club is a private member's club, owned by its members. It is Toronto's only waterfront private sports, recreation and family club offering various sports, including: 11 tennis courts (eight courts under the bubble for winter tennis); six badminton courts; sailing, yachting, dragonboating and rowing; bowling (indoor and lawn bowling); swimming; etc. It is located to the west of the TSCC.

Table 7 provides a listing of the major tourism and recreational events that occur along the Western Beaches area or planned for 2005. Larger tourism and recreational venues such as Ontario Place and Exhibition Place will have additional events. Most relevant to the Western Beaches Watercourse project are those that occur in Marilyn Bell Park or in the nearshore area of Lake Ontario. These events are highlighted in bold.

4.3.15 Visual Setting

The section of existing breakwater located within the proposed watercourse facility site is approximately 80 m offshore of Marilyn Bell Park. Although a familiar sight to most local residents, the existing breakwater is a relatively thin concrete structure that is in poor repair. It is a structure that has become part of the vista of Lake Ontario from many viewing locations in the Western Beaches area. Views along the Lake Ontario shoreline of this section of existing breakwater extend approximately 1 km to the east; and over 4 km to the west past Sunny Side Park. The most prominent views are from the western portion of Ontario Place and its bridges connecting it to CNE grounds and from the Argonaut Rowing Club house. The most prominent views of the section of existing breakwater located within the proposed watercourse are from the north, namely from Marilyn Bell Park, Lakeshore Boulevard. and bridges over the Gardiner Expressway at Jamieson Avenue and Dunn Ave. Broad vistas of Lake Ontario exist from along King Street West, local streets along southern portion of the Parkdale neighbourhood, and from highrise residential buildings within Parkdale. From the south, the existing breakwater is a visible feature well into Lake Ontario, but is most prominent in the nearshore area. In all cases, the existing breakwater is a distinctly visible feature in the foreground but becomes more difficult to distinguish from the background with distance.

Table 7. Major Tourism and Recreational Events in the Western Beaches Area

Date	Event	Location	DESCRIPTION
January	Toronto International Boat Show	National Trade Centre	Attracts 100,000 boating enthusiasts to Canada's largest boat show.
March	St. Patrick's Day Run	Exhibition Place	
March	Toronto Sportsmen's Show	National Trade Centre	A fishing and outdoor super show.
March	Toronto Fashion Week	Liberty Grand Entertainment Complex	
April	National Home Show	National Trade Centre	Shopping and trade show for renovating, decoration and landscaping products
April	Khalsa Day Parade	Exhibition Place	Over 50,000 participants take park in the Sikh community's celebration of the founding of the order of Khalsa
Spring / Summer	National Yacht Club – Evening Series	Sailing Course	Weeknight racing series
May – 1st weekend	**OSA Sailing Clinic & Launch Day**	**Lake Ontario**	**Toronto Sailing &Canoe Club**
May - Victoria Day	**Olympic Classes Regatta**	**Lake Ontario**	**Toronto Sailing &Canoe Club**
May	**National Yacht Club – 2.4 meter regatta**	**Sailing Course**	
May	BAD Ride for Charity	Exhibition Place	Bikers Against Despair in Support of the Distress Centres
May	**Ansaar Foundation Walkathon**	**Marilyn Bell Park**	**Walkathon for the Ansaar Foundation**
June- 1st weekend	**TARTS Regatta**	**Lake Ontario**	**Toronto Sailing & Canoe Club**
June 1, 2005	YMCA Corporate Team Challenge	Exhibition Place	Canada's only corporate team relay fun run or walk, now celebrating it's 25th year! Raise money for the YMCA Annual Giving Campaign.
June	**The Night Crawler "5 Miler"**	**Marilyn Bell Park**	**An open 5 mile run and a separate Corporate team Challenge 5 Mile Run.**
June 5, 2005	Becel Heart & Stroke Foundation Ride for Heart	Exhibition Place	Charity ride for heart and stroke foundation
June	Rick Hansen Wheels in Motion	Exhibition Place	Charity ride for to improving the quality of life of people with spinal cord injury
Summer	**Racing School**	**Watercourse, Lake Ontario**	**Toronto Sailing and Canoe Club & Boulevard Club has a junior day school and evening adult school weeknights**
Summer	Cirque du Soliel	Ontario Place	Annual circus celebration in Ontario Place parking lot
July	CHIN International Picnic	Exhibition Place	Variety of cultural entertainment, amusements and vendors
July	**Molson Indy Toronto**	**Exhibition Place(no access to Marilyn Bell Park)**	**This auto racing competition and exhibition is one of the country's premier annual sporting events.**
July	Allen's Family Day Challenge	Ontario Place	Run, walk, bike or skate charity event for Rose Cherry Home for Kids
July - August	**Caribana**	**Entire grounds Exhibition Place; Parade route & market place at Marilyn Bell Park**	**Over 1 million attend this festival of calypso, steel pan and Caribbean music.**
August	Fete Francophone	Ontario Place	Annual celebration of francophone culture
August	**National Yacht Club Alberg**	**Sailing Course**	
August	**National Yacht Club 2.4 m Championships**	**Sailing Course**	
August	**National Yacht Club LORC Open**	**Sailing Course**	
August	**Hogtown Heats**	**Watercourse**	**Argonaut Rowing Club annual 1000 m race**
August	**Summer Sensation**	**Marilyn Bell Park and Watercourse**	**Annual community dragon boat race festival**
August - September	**Canadian National Exhibition**	**Exhibition Place, Ontario Place, Marilyn Bell Park**	**Annual fairs with over 500 attractions, midway, entertainment, shopping and agricultural exhibits**
Sept - 1st weekend	**Canadian International Air Show**	**Exhibition Place, Ontario Place, Marilyn Bell Park**	
September	**National Yacht Club – Shark Gold Race**	**Sailing Course**	
September	**George Webb long distance race - 2nd weekend (TS&CC)**	**Harbour/Lake Ontario**	
September	**Weekend to End Breast Cancer Marathon**	**Exhibition Place**	**A 60km walk in support of Breast cancer research**
September - 2nd weekend	**Great White North Dragon Boat Challenge**	**Ontario Place, Watercourse**	**Annual dragon boat race event for charity**
September	Ontario Place In-water Boat Show	Ontario Place	
September	**Scotiabank Toronto Waterfront Marathon**	**Lakeshore Blvd, Exhibition Place**	**A half-marathon and 5k run/walk on flat, fast, waterfront course**
September	TIWBS - 15 & 18 event only - no rides & attractions	Ontario Place	
September	**Baskin Robbins Fishing Festival**	**Ontario Place & Lake Ontario**	
September	**National Yacht Club – Albacore reg**	**Sailing Course**	
October	**National Yacht Club – Around Island Race**		
October	**Haul Out - 3rd Saturday (TS&CC)**	**Toronto Sailing & Canoe Club**	
November	**Frostbite Sprints**	**Watercourse, Marilyn Bell Park**	**Argonaut Rowing Club 500 m race**
November	Royal Agricultural Winter Fair	National Trade Centre	Indoor agricultural, horticultural, canine and equestrian event

4.3.16 Land Use

The proposed watercourse site is situated within the Central Waterfront planning area. As shown in **Figure 17**, there are various land uses within the immediate area surrounding the proposed new breakwater site. The land uses depicted on this figure include residential (30%), industrial (18%), commercial (9%), "open area" including the Gardiner Expressway and Lakeshore Blvd (9%) and institutional (9%). Lands used for parks and other recreational land uses comprise approximately 27% of the land area. The City of Toronto's Official Plan (2002) does not envisage substantial changes in land uses in the Western Beaches area into the foreseeable future. There are no Secondary Plans in the Western Beaches area.

The residential neighbourhood closest to the proposed site, Parkdale, is located to the north of the proposed watercourse site. Parkdale (Ward 14) was home to 54,835 people and consisted of 25,275 households in 2001. Parkdale is situated in south west Toronto. It is bounded by Keele Street and Parkside Drive to the west, the CNR/CPR tracks to the east, the CPR tracks to the north and Lake Ontario to the south. Parkdale's history began in the late 1800s when it was an elite residential suburb. Parkdale's popularity led to its incorporation as a village in 1878. Parkdale, became Toronto's playground by the lake in 1922, when the Sunnyside Amusement Park and Bathing Pavilion opened for business on Parkdale's beaches. In 1956, Sunnyside was shut down by the City in order to make room for the Gardiner Expressway and a revamped Lake Shore Boulevard. These new expressways cut Parkdale off from the lake. The population of Parkdale (Ward 14) grew by 3.4% between 1996 and 2001. Approximately 38% of occupied private dwellings were in high-rise apartments, 25% were in low-rise apartments and 16% were in single-detached houses in 2001. In 2001, 25% of occupied private dwellings were owned while 75% were rented. Other residential neighbourhoods include Swansea and High Park to the west.

The major industrial areas are located north of the Gardiner Expressway and east of Dufferin Street and several pockets of older industrial sites throughout Parkdale. Parkdale has gone through a period of decline and is currently undergoing a process of renewal and revitalization, with older industrial buildings being converted into residential lofts and commercial offices. In Swansea, an old unused Stelco site has been remediated and is being redeveloped into a mix of residential and commercial uses. Similarly, numerous government and institutional land uses (i.e. schools, hospitals and other health care facilities, government buildings) are located throughout the Parkdale and Swansea neighbourhoods; the largest of which is the St. Joseph Health Centre complex located at 30 The Queensway, west of Roncesvalles Avenue.

Major commercial land uses in the Western Beaches area include Ontario Place and the Canadian National Exhibition grounds. These are major tourism and recreational features along the waterfront that attract residents and visitors alike to the area. Other commercial areas are located along major arterial roads such as King Street West, Queen Street West and Roncesvalles Avenue.

Parks and recreational land uses located along the waterfront, include Marilyn Bell Park, Budapest Park, Sunnyside Park. These parks are host to Sir Casimir Gzowski Beach, Sunnyside Beach and Budapest Beach. High Park and Grenadier Pond, located more inland north of the Gardiner Expressway, are also major components of the open space inventory in the Western Beaches area. Most relevant to this project, the City of Toronto's Official Plan (2002) indicates that any development provided for in *Parks and Open Space Areas* will:

a) protect, enhance or restore trees, vegetation and other natural heritage features;

b) preserve or improve public visibility and access, except where access will damage sensitive natural heritage features or areas, or unreasonably restrict private property rights;

c) maintain, and where possible create linkages between parks and open spaces to create continuous recreational corridors;

d) maintain or expand the size and improve the usability of publicly owned *Parks and Open Space Areas* or public parks, recreational and cultural purposes;

e) respect the physical form, design, character and function of *Parks and Open Space Areas*; and

f) provide comfortable and safe pedestrian conditions.

4.3.17 Human Health

Human health can be defined very broadly as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. However, for the purposes of this environmental assessment two health issues are highlighted due to their potential linkages with the project. These are air quality and water quality. Previous sections of this report provided an overview of existing air and water quality issues in the study area. This section provides more details regarding the implications of adverse air and water quality on human health.

In Toronto, adverse air quality, and smog in particular, causes adverse effects on people's health. Young children, pregnant women, the elderly, asthmatics, people who work or exercise outdoors are particularly vulnerable. Smog alerts are issued by the MOE when smog conditions are expected to reach dangerous levels in Ontario. These alerts are often triggered on sunny days with no wind when ozone levels are high. They usually occur early May to late September but can occur anytime throughout the year. **Table 8** identifies the number of advisories issued and smog days encountered since 1995 across Ontario.

Table 8. Smog Advisories Issued for Ontario by the Ministry Since 1995

Year	Number of Advisories Issued	Number of Smog Days
1995	6	14
1996	3	5
1997	3	6
1998	3	8
1999	5	9
2000	3	4
2001	7	23
2002	10	27
2003	7	19
2004	8	20
2005 (up to April 29, 2005)	2	7

During Toronto summers, the City's beaches are tested for water quality and are life guarded. If the water quality is not acceptable for swimming, Toronto Public Health will post signs warning against swimming.

When a beach is posted, Public Health officials advise swimmers not to enter the water due to the high amounts of *E. coli* bacteria in the water. These test results are based on the previous day's sample. As noted previously, for the Boulevard Club area, it is estimated that the beach postings occur about 70% of the swimming season. *E. coli* bacteria, which is found in animal and human waste, can cause ear, nose, and throat infections, as well as stomach upsets, skin rashes, and diarrhea.

4.3.18 Transportation and Navigation

Ground Traffic

Road access to Marilyn Bell Park is via south of Lakeshore Blvd. TTC bus and/or streetcar routes operate both seasonal and year-round from the north, east and west. Go Transit has an existing platform at exhibition place that can be utilized. Mimico Station is located to the west and Union Station, which is the hub of the transit network for the City.

Existing parking facilities are abundant in the direct vicinity of the new watercourse. Exhibition Place offers a parking facility that accommodates over 500,000 vehicles per year. Parking lots also are available just east of Ontario Place and at numerous other locations along Lakeshore Road.

Lakeshore Road, the Gardiner Expressway and major city streets like Dufferin Street and Jameson Avenue give direct connections to the Marilyn Bell Park. Controlled access from the Gardner Expressway to Lakeshore Road and the park is from the Jameson Avenue. Additional exits at South Kingsway to the west and Spadina Avenue to the east act as additional links to Lakeshore Road.

Recreational Boating and Navigation

Recreational boaters, including power, sail, rowing, canoes, kayaks and dragon boats use Humber Bay extensively. Moorings for sail craft are provided inside the existing breakwater. Toronto Sailing and Canoe Club presently has 10 moorings behind the existing breakwater. Canoeists, paddlers and rower use the existing course inside the existing breakwater. There is an access for powerboats to Ontario Place marina through the existing breakwater to the west of Ontario Place across from the eastern end of Marilyn Bell Park. The recreational boating season is typically considered to extend from May to October.

Facilities within Humber Bay or with direct access from Humber Bay include: Toronto Sailing & Canoe Club, Argonaut Rowing Club, Boulevard Club, and Ontario Place. To the east of the site is the Western Gap providing access to Toronto Inner Harbour. Additional recreational boating facilities are located to the east and west of Humber Bay: Alexandra Yacht Club, Ashbridges Bay Yacht Club, Bluffers Park, Etobicoke Yacht Club, Harbour City Yacht Club, Island Yacht Club, Lake Shore Yacht Club, Marina Four, Marina Quay West, National Yacht Club, Ontario Place, Outer Harbour Marina, Queen City Yacht Club, RCYC, Toronto Island Marina, Toronto Multi-Hull, Marina 4.

Commercial Navigation

Commercial vessels use Humber Bay for anchorage at depths greater than 10 m. As of June 2002, the Western Gap has been closed to vessels with a draft greater than 3.6 m. Closure of the channel is a result of reduced depths due to siltation in the channel. Vessels with drafts greater than 3.6 m now must use the Eastern Gap to enter and leave the Port. This prohibits most large commercial ships from using the Western Gap, which in turn limits passage of seagoing vessels and lakers in proximity to project site. This restriction is expected to remain in place over the long term. In addition, in May 2003 the Western Gap was closed to commercial shipping due to new height restrictions imposed on the vessels by new landing and take-off procedures at the Toronto City Centre Airport located on Toronto Island. This limits boat traffic through the Western Gap to tour boats and recreational boats. Commercial tour boats operate in Humber Bay. Tour boats operate from approximately April to October.

4.3.19 Heritage/Archaeological Environment

Stage 1 archaeological assessments were undertaken for both the landside and maritime components of the project. A Stage 2 assessment was also completed for the maritime component as it was discovered to be a high potential area. No heritage or archaeological artefacts were identified during this assessment (see **Appendix B**).

Landside Archaeological Potential

The first recorded Europeans to travel through the area have been reported as LaSalle, Brebeuf, and Champlain. The first recorded French settlement, Magasin Royal, was one of three French trading posts built in the Lake Ontario area in the 1720s. Toronto's Magasin Royal was thought to be an independent functioning entity until the construction of the stone Fort at Niagara in 1727, at which point the small wooden fort/post on Baby Point was considered a "dependant" on the newer Fort, which due to its small size and dependency, was later abandoned in 1730.

A temporary French structure is reported to have been constructed at the mouth of the Humber to control access to the Toronto Carrying Place, the overland trade route now determined to be essential, in late 1749/early 1750. The purpose of this post was to control not only access to the portage, but also to control trade with the local native groups. In the summer of 1750 a second structure was reportedly constructed. This structure is as of yet, not conclusively identified, but generally accepted to be in the Humber River, to Toronto area. In September of 1750 construction began on Fort Rouillé, located at the entrance to Toronto Harbour, now known to be in the location of the monument, on the Canadian National Exhibition Grounds.

In 1787, the area along the Lakeshore was purchased from the Mississauga Nation and in 1788, the first formal survey of what was to become the colony of York was undertaken. The actual settlement of Toronto, then York, was begun in 1793. Fort York was established and had a typical long dock for mooring as well as water pumps to provide water to the fort.

The issuance of water lots along the study area commenced in the late 1800s. Infilling began in the water lots in the early 1900s. This created the boulevard that currently runs along the waters edge, Lakeshore Drive.

Maritime Archaeological Resources

Since Lake Ontario was used as the main "highway" of access to many points in Ontario for the majority of the 19th century, ships were lost frequently to shoals, gales and unknown circumstances. The diving community has known of many wrecks in Lake Ontario that attest to the volatile nature of shipping. Chris Kohl, in his book, Dive Ontario (1990), lists two wrecks and their details, as "near the mouth of the Humber".

The existing breakwater was constructed in the early 1900s to prevent erosion of the shoreline. The exact dates are not known. The breakwater is not listed on the City's heritage inventory as a designated structure.

4.3.20 Aboriginal Interests

Aboriginal people have lived from the land and its resources for centuries. In their role as stewards of the environment, Aboriginal people and their culture take a very long perspective on how human actions today will affect the environment for the next seven generations of people. For this reason, it is acknowledged that First Nations and Aboriginal peoples are an important stakeholder in the environmental assessment process. Given the level of urbanization within the study area and its existing use for recreation, it is not likely that Aboriginal people currently use the area for traditional or cultural pursuits.

4.4 Identification of Valued Ecosystem Components

A fundamental objective of the EA process when assessing potential effects on the environment is to select VECs. VECs are features of the environment selected to be a focus of the EA because of their ecological, scientific, socio-economic, cultural, health or aesthetic importance, as well as their potential to be affected by the Western Beaches Watercourse project. These VECs are considered to be the primary receptors of concern and the focus of the environmental assessment, particularly the cumulative effects assessment component. Given that the project is located in a highly urbanized environment, many of the VECs are socio-economic and cultural in nature, rather than ecological. **Table 9** outlines the VECs identified for the EA and a rationale for their selection.

Table 9. Working List of VECs

VEC	Rationale
Nearshore Area of Lake Ontario	The nearshore area of Lake Ontario, including inner harbour area provides the means for commercial navigation and a place to undertake water-based recreational activities such as boating, rowing, sailing, etc.
Nearshore Surface Water Quality	Good surface water quality encourages the healthy and vibrant use of the waterfront.
Sport Fish	Sport fish inhabit the nearshore area of Lake Ontario in the vicinity of the western beaches. The presence of sport fish such as brown trout, smallmouth bass, largemouth bass, perch, pike and crappie support the use of the waterfront for fishing purposes.
Waterfront Tourism and Recreational Features	Residents and visitors rely on the availability and quality of tourism and recreational facilities and amenities, such as Ontario Place, Exhibition Place, parks, beaches, trails and recreational clubs for their recreational pursuits, in particular walking, rollerblading, biking and general passive recreational uses. Several boating, sailing and rowing clubs have their clubhouses located along the waterfront.
Community Character	The distinctive or unique qualities of the community give a community or neighbourhood its character.
Archaeological Resources	Archaeological resources are valuable to our understanding of human history, research and public education. They also have spiritual and cultural meaning for Canadians. Aboriginal People rely on the presence and knowledge of heritage and cultural resources for their spiritual and cultural meaning.

4.5 Evaluation of the Alternative Solutions

4.5.1 Evaluation Methodology

With the existing environment in mind, the alternative breakwater solutions and alternative Cowan Avenue Outfall solutions were comparatively evaluated according to a "net effects analysis". The "net effects analysis" consisted of the following steps:

- **Step No. 1**: Develop appropriate evaluation criteria based on the problem / opportunity statement, the alternative solutions being considered, existing conditions, and a review of the Municipal Class EA. The evaluation criteria for the alternative breakwater solutions and alternative Cowan Avenue Outfall solutions are contained within the evaluation matrices shown in **Tables 10 and 11**, respectively. The developed evaluation criteria were grouped into the following five categories of consideration representing the broad definition of the environment as described in the EA Act: **Technical, Natural Environment, Social, Cultural,** and **Financial.**
- **Step No. 2:** Apply the evaluation criteria to each alternative solution in order to identify potential effects on the environment.
- **Step No. 3:** Develop appropriate mitigation/compensation measures based on current procedures, historical performance, and existing environmental conditions to minimize or offset any potential negative environmental effects on the environment.
- **Step No. 4:** Apply the mitigative/compensation measures to determine the net positive or negative effects on the environment.

Following Step No. 4 of the "net effects analysis", the alternative solutions were compared through a Reasoned Argument or Trade-off method as a means of identifying the recommended breakwater and Cowan Avenue outfall alternatives. This method highlights the relative advantages and disadvantages of each alternative based on its identified net effects.

Table 10 summarizes the net effects analysis for the Alternative Breakwater Solutions, and **Table 11** summarizes the net effects analysis for the Alternative Cowan Avenue Outfall Solutions.

Table 10. Evaluation of Alternative Breakwater Solutions

Category of Consideration / Evaluation Criteria	Alternative Breakwater Solution No. 1 Do Nothing	Alternative Breakwater Solution No. 2 Build a New Breakwater Connected to Ontario Place	Alternative Breakwater Solution No. 3 Build a New Breakwater Not Connected to Ontario Place
TECHNICAL			
Potential ability of breakwater to protect watercourse from waves.	Provides no wave protection for entire watercourse.	Provides wave protection for entire watercourse.	Provides wave protection for most of watercourse except for eastern end (starting area) requiring the need for additional wave protection at this location.
Potential length of new breakwater.	No new breakwater.	Shortest length of new breakwater needed to be constructed plus potential closure at west end is 85 m long.	Longer length of new breakwater needed to be constructed plus potential closure at west end is 85 m long.
Potential for possible future public access along new breakwater.	No possible future public access provided.	Possible future public access provided via direct connection to Ontario Place.	Possible future public access would require a bridge or causeway structure to be built from Ontario Place.
Potential need to modify Cowan Avenue outfall.	No modification required.	Modification required.	Modification required.
NATURAL ENVIRONMENT			
Potential long-term effects on existing aquatic features.	No long-term effects on aquatic features.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.
Potential effects on water quality within the watercourse.	Water quality within the watercourse remains unchanged.	Greater potential for reduced water quality within watercourse due to lack of water circulation because breakwater would be connected to Ontario Place and potentially closed at west end. This may be mitigated through the placement of pipes in the new breakwater to increase water circulation.	Less potential for reduced water quality within watercourse because eastern end of breakwater would not be connected to Ontario Place.
Potential for short-term construction related effects on aquatic features.	No short-term construction related effects on aquatic features.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.
Potential for short-term construction related effects on migratory birds.	No short-term construction related effects on migratory birds.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.
Potential effects on existing terrestrial features.	No effects on terrestrial features.	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).
SOCIAL ENVIRONMENT			
Potential short-term construction related effects on existing area residents, businesses, and/or events.	No short-term construction related effects on existing area residents, businesses, and/or events.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.
Potential effects on existing quiet water area for paddlers/rowers.	Existing quiet water area remains unchanged.	Largest quiet water area would be created for use by paddlers/rowers with closures at ends of breakwater.	A larger quiet water area would be created for use by paddlers/rowers.
Potential effects on boat access to Ontario Place marina.	Boat access to Ontario Place marina remains unchanged.	Ontario Place marina access relocated to the west end of the new breakwater. Requires management of boats entering marina during course events.	Ontario Place marina access relocated to between end of new breakwater and Ontario Place shoreline. Requires management of boats entering marina during course events.
Potential flexibility to accommodate future events.	No flexibility to accommodate future events.	Less flexibility to accommodate future events.	Less flexibility to accommodate future events.
CULTURAL ENVIRONMENT			
Potential effects on underwater cultural/heritage resources.	No potential negative effects on underwater cultural/heritage resources.	Potential underwater cultural/heritage resources being determined through a Stage 2 Archaeological Assessment.	Potential underwater cultural/heritage resources being determined through a Stage 2 Archaeological Assessment.
FINANCIAL			
Potential capital costs associated with the alternative.	No capital costs.	Less than Alternative #3 (detailed costing to occur once design has been finalized).	Most expensive (detailed costing to occur once design has been finalized).
RANKING OF SOLUTIONS	**THIRD**	**FIRST**	**SECOND**

Table 11. Evaluation of Alternative Cowan Avenue Outfall Solutions

Category of Consideration / Evaluation Criteria	Alternative Cowan Avenue Outfall Solution No. 1 Do Nothing	Alternative Cowan Avenue Outfall Solution No. 2 Maintain Existing Outfall Alignment and Extend at Lower Depth	Alternative Cowan Avenue Outfall Solution No. 3 New Outfall Alignment
TECHNICAL			
Potential effects on current outfall operation.	Current outfall operation remains unchanged.	The current outfall will be out of service for an extended length of time during construction.	The current outfall will be out of service for a shorter length of time during construction.
NATURAL ENVIRONMENT			
Potential long-term effects on existing aquatic features.	No long-term effects on aquatic features.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.
Potential effects on water quality within the watercourse.	Greater potential for reduced water quality due to effluent discharge within watercourse.	Water quality within watercourse unaffected by effluent discharge from outfall.	Water quality within watercourse unaffected by effluent discharge from outfall.
Potential for short-term construction related effects on aquatic features.	No short-term construction related effects on aquatic features.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.
Potential for short-term construction related effects on migratory birds.	No short-term construction related effects on migratory birds.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.	Minor short-term disruption to stopover / roosting areas in the vicinity of construction activities.
Potential effects on existing terrestrial features.	No effects on terrestrial features.	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).
SOCIAL ENVIRONMENT			
Potential short-term construction related effects on existing area residents, businesses, and/or events.	No short-term construction related effects on existing area residents, businesses, and/or events.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.
Potential effects on the short-term use of Marilyn Bell Park.	Short-term use of Marilyn Bell Park remains unchanged.	A portion of Marilyn Bell Park would have to be closed for an extended length of time.	A portion of Marilyn Bell Park would have to be closed for a shorter length of time.
CULTURAL ENVIRONMENT			
Potential effects on underwater cultural/heritage resources.	No potential negative effects on underwater cultural/heritage resources.	Archaeological investigation currently underway to determine potential for underwater effects.	Archaeological investigation currently underway to determine potential for underwater effects.
FINANCIAL			
Potential capital costs associated with the alternative solution.	No capital costs.	More expensive (detailed costing to occur once design has been finalized).	Less expensive (detailed costing to occur once design has been finalized).
RANKING OF SOLUTIONS	**THIRD**	**SECOND**	**FIRST**

4.5.2 Ranking of the Alternative Breakwater Solutions

The Alternative Breakwater Solutions were ranked in order of preference according to their net effects on the environment as presented below.

Rank	Alternative Breakwater Solutions
1st	**Alternative Solution No. 2: Build a New Breakwater Connected to Ontario Place**
2nd	**Alternative Solution No. 3: Build a New Breakwater Not Connected to Ontario Place**
3rd	**Alternative Solution No. 1: Do Nothing**

The following paragraphs provide a rationale for the ranking of each of the alternative breakwater solutions.

- **First Ranked Alternative: Alternative Breakwater Solution No. 2: Build a New Breakwater Connected to Ontario Place**

  This alternative solution was ranked first overall when compared to the other two alternatives because it possesses the following advantages:

  a) Provides wave protection for entire watercourse.
  b) Requires the shortest length of new breakwater to be constructed.
  c) Provides the largest quiet water area for use by paddlers/rowers (with closures at ends of breakwater).
  d) Estimated to be the least expensive.

  However, in comparison to Alternative Breakwater Solution No. 3, it would result in closure at both ends resulting in poorer water quality conditions. In addition, the requirement to relocate the Ontario Place Marina boat access through the breakwater further west will result in greater conflict between power boaters and rowers/paddlers under normal conditions, and will require management of power boat activities while races are being held on the watercourse (the power boat access and the return lanes for the race course overlap). However, these disadvantages do not outweigh its advantages over Alternative Breakwater Solution No. 3.

  In comparison to the "Do Nothing" alternative, building a new breakwater addresses the problem/opportunity statement with only minor adverse effects on the natural, social, and cultural environments that can be mitigated.

- **<u>Second Ranked Alternative</u>: Alternative Breakwater Solution No. 3: Build a New Breakwater Not Connected to Ontario Place**

  While this alternative has the advantage of improving water quality within the watercourse through greater circulation as a result of the open eastern end, it has similar disadvantages as Alternative Breakwater Solution No. 2 and has the further disadvantage of not providing the same level of wave protection (at the open eastern end). In addition, it is expected to cost more than Alternative Breakwater Solution No. 2.

- **<u>Third Ranked Alternative</u>: Alternative Breakwater Solution No. 1: Do Nothing**

  Although the "Do Nothing" alternative would not result in any potential natural, social or cultural negative effects and would have no capital costs associated with it, it does not address the problem / opportunity statement. Consequently, the City would not be able to hold the IDBF CCWC in 2006, and would not take the first step in building a facility that would allow for the potential of future rowing/paddling competitions being held in the Western Beaches.

4.5.3 Recommended Breakwater Solution

Alternative Solution No. 2: Build a New Breakwater Connected to Ontario Place was identified as the recommended solution because it is able to fully address the problem/opportunity statement, while resulting in only minor adverse natural, social and cultural effects that can be mitigated (and in the case of fisheries habitat, enhanced), while offering significant social benefits to the existing boating community in the Western Beaches and to the City as a whole.

4.5.4 Ranking of the Alternative Cowan Avenue Outfall Solutions

The Alternative Cowan Avenue Outfall Solutions were ranked in order of preference according to their net effects on the environment as presented below:

Rank	Alternative Cowan Avenue Outfall Solutions
1st	**Alternative Cowan Avenue Outfall Solution No. 3: New Outfall Alignment**
2nd	**Alternative Cowan Avenue Outfall Solution No. 2: Maintain Existing Outfall Alignment and Extend at Lower Depth**
3rd	**Alternative Cowan Avenue Outfall Solution No. 1 – Do Nothing**

The following paragraphs provide a rationale for the ranking of each of the Alternative Cowan Avenue Outfall Solutions.

- **First Ranked Alternative: Alternative Cowan Avenue Outfall Solution No. 3: New Outfall Alignment**

  This alternative solution was ranked first overall when compared to the other two alternatives because it possesses the following advantages:

  a) By constructing on a new alignment it is possible to leave the existing outfall operational for a much longer time period during construction.
  b) A new outfall alignment will take effluent discharge outside of the new breakwater thus maintaining the level of water quality within the breakwater (nearshore area).
  c) Constructing on a new alignment decreases the duration of construction impact on a portion of Marilyn Bell Park.
  d) Estimated to be less expensive than Alternative Solution No. 2.

- **Second Ranked Alternative: Alternative Cowan Avenue Outfall Solution No. 2: Maintain Existing Outfall Alignment and Extend at Lower Depth**

  While this alternative has the same potential natural and cultural negative effects, it has additional disadvantages in comparison to Alternative Cowan Avenue Outfall Solution No. 3 resulting it being ranked second.

- **Third Ranked Alternative: Alternative Cowan Avenue Outfall Solution No. 1: Do Nothing**

  Although the "Do Nothing" alternative would not result in any potential social or cultural negative effects and would have no capital costs associated with it; it has the disadvantage of allowing the existing Cowan Outfall to discharge effluent into the closed, nearshore area inside the breakwater resulting in reduced water quality. This has the potential to jeopardize the City's ability to hold the IDBF CCWC in 2006, and would continue to pose potential health impacts that could limit the potential of future rowing/paddling competitions being held in the Western Beaches. As a result, this alternative was ranked last.

4.5.5 Recommended Cowan Avenue Outfall Solution

Alternative Solution No. 3: New Outfall Alignment was identified as the recommended solution because it fully addresses the problem/opportunity statement, while minimizing the technical, natural, social and cultural adverse effects.

4.6 Phase Two Consultation Activities

4.6.1 Notification of Project Commencement and Public Information Centre No. 1

The "Notice of Project Commencement" was mailed on February 25, 2005 to all relevant government review agencies, politicians, local boating clubs, etc. The same notice was published in The Toronto Star on March 1 and 8, 2005 to inform the general public, and also placed on the TWRC website (www.towaterfront.ca). The notices described the purpose of the project, identified the EA process being followed, identified the upcoming PIC, and requested comment. A copy of the notice is contained in **Appendix C**.

4.6.2 Written Comments Received

Written comments were received throughout the project. All comments were reviewed and incorporated into the study where applicable. The following provides a summary list of the issues raised in written comments received from the start of the project up to PIC No. 1:

- Cost of the construction.
- Potential for wind turbines on the breakwater.
- EA process.
- Additional information request.
- Location of the watercourse.
- Keep the watercourse open and do not close it.
- Opportunity to improve water quality through breakwater design.
- Impact of breakwater on the Humber current.
- Heritage resources.
- Effect on Ontario Place.
- Request to be involved.
- Request to move the breakwater east of Ontario Place.
- Comment on PIC No. 1 format.
- Concern over the length of the watercourse.
- Evaluation of alternative sites for the breakwater.
- Timing of comments and opportunities for additional stakeholder input.
- Staging and construction scheduling.
- Temporary or permanent land based facilities.
- Pathway along the top of the breakwater.
- Watercourse safety
- Support for the new facility.
- Consideration of fisheries issues.
- Attention to sustainability opportunities in the project.

A summary of the comments received, including when they were received, can be found in the table at the start of **Appendix D**. A copy of the actual correspondence received can be found in chronological order following the summary table in **Appendix D**.

4.6.3 Public Information Centre No. 1

As part of Phase Two of the Class EA planning and design process, a PIC was held on March 10, 2005 at The National Trade Centre, Canadian National Exhibition Grounds, from 6:00 p.m. to 9:00 p.m. to introduce the project; present background information and provide a project history; show the proposed configuration of the watercourse; describe the EA and approvals processes being followed; identify the alternative solutions being considered, including their evaluation and identification of the recommended solutions; and identify the next steps. A presentation was given at 7:00 p.m. to provide an overview of the project history as well as overview of the information contained in the display materials. A copy of the display materials available at PIC No. 1 and the presentation slides can be found in **Appendix E**.

The objective was to provide the PIC No. 1 attendees with an opportunity to offer their comments on the material being presented, and discuss them directly with the Project Team. This included a Question & Answer session following the formal presentation.

A total of 125 people attended the first PIC, and 7 comment forms were submitted. The following provides a summary of the key issues raised in these comment forms:

a) Support the idea of a multi-sport watercourse within the GTA, and pleased to see the commitment of three levels of government to building it. Ensure that the project proceeds because this new facility will succeed in drawing people to the lake, it will open up this portion of the waterfront to more citizens, and it fits with the waterfront revitalization plan.

b) Concerned about the location and orientation of the proposed facility because of its short length (limits the ability to use the watercourse for other boating sports after the CCWC in 2006), and it current orientation may limit the potential for extending it to accommodate longer race courses in the future (extension would go into deep water).

c) Planning for the future of the waterfront (breakwater extension) should begin now (e.g., stakeholder meetings).

d) Consultation must include all boating stakeholders currently located in the Western Beaches, and include the provincial and national canoeing / kayaking / rowing sport governing bodies. Those working on the design must be familiar with the requirements of the various sports.

e) Concerned about safety because of the wind and rough water at the proposed location west of Ontario Place and increased boat traffic (potential collisions).

f) Recognize the potential advantage to the rowing community of an increase in rowable flat water.

Appendix F contains a copy of each comment form submitted at PIC No. 1.

There were also 11 written comments received following PIC No. 1. The following summarizes the issues raised:

a) Support for the new facility. This should be just the beginning of even more to come.
b) The proposed location is not the best, and the length of the proposed course is too short (should be longer to accommodate rowing, canoeing and kayaking).
c) Environmental enhancement opportunities as part of development of the breakwater (e.g., wind turbines on the breakwater, and UV units installed in the breakwater to improve water quality).
d) Consideration of cultural heritage issues, such as the French Fort and the landing spot.
e) Consideration of fisheries issues.
f) Attention to sustainability opportunities in the project.

A summary of the comments received, including when they were received, can be found in the table at the start of **Appendix D**. A copy of the actual correspondence received can be found in chronological order following the summary table in **Appendix D**.

Apart from the written comments received, attendees at PIC No. 1 voiced their issues and concerns during a Question & Answer session following the formal presentation. The following briefly summarizes the major issues raised most often during the Question & Answer session:

a) The project timelines may be too aggressive. Need more time to study the issues and address the concerns.

b) The best section of the existing breakwater is being replaced. Some thought should be given to looking at an alternate location, especially where the breakwater is in much worse condition, such as in front of the Argonaut Rowing Club and the Toronto Sailing an Canoe Club.

c) Concern that this will become a “one off” watercourse facility that cannot be used by for other boating events in the future. Where will the money come from to expand the course in the future?

d) The existing boating/sailing/paddling clubs in the Western Beaches need to be more involved in the project.

e) The project team needs to have more contact with the national sporting federations from the other water sports to ensure that the needs of these other water sports are fully understood and incorporated into the assessment.

f) It is important to review proposals for projects from the past and apply this knowledge to the current project.

g) What sort of temporary and permanent facilities are proposed along with the breakwater construction?

h) Who will be allowed to use this watercourse after the IDBF event in 2006, and who will be responsible for maintaining it and governing its use?

i) There are safety concerns regarding the movement of boats if the watercourse is built in its proposed location.

j) Attention should also be paid to the "hard" shoreline that currently exists along Marilyn Bell Park and something should be done to "soften" this shoreline.

A summary of the verbal comments received and the verbal responses provided during the Question & Answer session are presented in **Appendix G**.

4.6.4 Stakeholder Consultation Meetings

A meeting was held on March 8, 2005 between the TWRC, the City, the TRCA, the Consulting Team and members of the ARC, the Boulevard Club and the TSCC, Rowing Canada and the Canadian Canoe Association. The meeting was requested by the clubs and the governing sport bodies. They were concerned that the location of the proposed course did not address many of the issues facing the Clubs. The organizations stated that both canoeing and rowing require a longer course in order to host events and the alternative solution presented at PIC No. 1 would be expensive to extend to that required length. As a result, the proposed location did not allow for an economical extension of the course in the future should funding be available.

A general briefing of the project was provided and the topics of discussion that followed included:

a) The desire to extend the course beyond 650 m.
b) The current condition of the breakwater.
c) The extent of the landbased facilities.
d) The legacy of the course.
e) Ongoing operation.
f) Safety of the course.

The end result was a better understanding of the needs of the boating community, and their issues and concerns with the proposed project.

Following PIC No. 1, several meetings were held with various project stakeholders.

On March 9 and 11, 2005, members of the Project Team met with officials from Ontario Place and from the Province (Ministry of Public Infrastructure) to discuss issues concerning the proposed location of the watercourse and its relationship to Ontario Place. The issues raised were the ongoing operation of the marina at Ontario Place, the water lot and the ongoing operation of the Watercourse. In response, TWRC stated that the operation of the marina could continue and a briefing note would be prepared for the Ontario Place Board of Directors dealing with the issue of construction in Ontario Place's waterlot.

On March 30, 2005, a meeting was held with the technical advisor of the CCWC organizing committee and a representative of Rowing Canada to review course extension possibilities. The idea was brought forward to relocate the proposed watercourse further westward and change its orientation to the shoreline in order to allow for the future extension of the course in shallower water. The rationale for the relocation was based on the interest in ensuring a legacy course for the community that did not preclude the extension of the course in a subsequent phase of the project. The Project Team members in attendance at the meeting responded by saying that they would present this solution to a technical committee for review, and costing of this solution would be prepared.

On March 31, 2005, a meeting was held with the Technical Committee (made up of members from the ARC, Canadian Canoe Association, Row Ontario and the CCWC organizing committee) to discuss the potential for course extension / relocation, depth issues, and construction phasing. The issues raised were alignment of the course, the existing breakwater condition, start/finish areas, future extension and the depth of the course. In response, TWRC stated that it would be possible to move the course westward provided the IDBF agreed to relax the depth requirements for the 2006 event. As a result of these meetings, it was agreed to approach the IDBF for an exemption of the rules rather than build the course in the location associated with the recommended breakwater solution.

Through subsequent discussions with the IDBF, it was agreed that the minimum depth requirements could be revised, and therefore the watercourse facility could be built in slightly shallower water. As a result of this change, building a new breakwater off of Marilyn Bell Park became viable.

On April 1, 2005, Project Team members held a meeting with staff from Exhibition Place, the Air Show, the Canadian National Exhibition, and Ontario Place to discuss the potential for impacts to these events from the project and the proposed construction phasing. The issues raised were the construction schedule, the construction footprint and the impact it would have on the particular events occurring in the vicinity of the watercourse. In response, TWRC stated that the construction would start in August, it would cease for the Air Show, and every attempt would be made to mitigate any adverse effects. It was also agreed

that a construction liaison committee would be established to ensure a regular exchange of information to ensure that the needs of the event organizers are understood and the appropriate measures put in place to minimize any adverse effects from the construction stage.

In April 2005, project team members contacted Mississaugas of New Credit First Nations members to discuss their interest in the project. A presentation to the band may take place.

4.6.5 Government Meetings

On April 4, 2005, Project Team members met with MNR staff to discuss the Public Lands Act requirement, land tenure issues and the potential of removing the in-water work restriction through April, May and June. This meeting was followed by a second meeting with fisheries staff from MNR and from the Lake Ontario Management Unit to pursue the latter item in greater detail. MNR staff indicated that with some attention to turbidity mitigation, they would be prepared to consider allowing work during April, May and June. In addition, fish habitat compensation concepts were discussed.

A third meeting was held on May 4, 2005 between TRCA, DFO, MNR and members of the Consulting Team to discuss preliminary results of the Habitat Alteration Assessment Tool for fish habitat compensation, proposed construction mitigation measures and timing of the project. In addition to these formal meetings, aquatic staff from TRCA and the Consulting Team met several times on an informal basis to develop fish habitat compensation measures.

4.7 Identification of the Preferred Solutions

4.7.1 Preferred Breakwater Solution

Based on the comments received during and following PIC No. 1, including those from the stakeholder meetings described in the previous section, a fourth alternative breakwater solution was developed and comparatively evaluated along with the other three solutions prior to identifying a preferred breakwater solution.

In this additional alternative, the location of the breakwater would be constructed further to the west so that it is more centrally located across from Marilyn Bell Park (**see Figure 18**). Additionally, both ends of the new breakwater would be curved around to meet the existing breakwater and thus close off the ends to provide wave protection to the watercourse.

As a result of adding Alternative Breakwater Solution No. 4, it was necessary to revisit the evaluation of Alternative Breakwater Solutions previously undertaken. Consequently, all four Alternative Breakwater Solutions were comparatively evaluated through the same "net effects analyses" approach described earlier. **Table 12** summarizes the net effects analysis.

Jameson Avenue

Gardiner Expressway

Lake Shore Boulevard West

135 m

650 m

Marilyn Bell Park

Cowan Avenue Outfall Shaft

New Breakwater

Existing Breakwater

Lake Ontario

-4

-5

-6

-7

-8

-9

Legend

New Watercourse

Gartner Lee

MacViro

Baird

Alternate Breakwater Solution No. 4
Off Marilyn Bell Park

Western Beaches Watercourse EA

Project 50170, May 2005

100 50 0 100 m

Figure 18

1:3,000

Map Document: (N:\Projects\2005\50170\2005\Final\GISSpatial\50170_alter_breakwall_sol_num4_fig6.mxd) 16/05/2005 -- 12:12:48 PM

Table 12. Evaluation of Four Alternative Breakwater Solutions

Category of Consideration / Evaluation Criteria	Alternative Breakwater Solution No. 1 Do Nothing	Alternative Breakwater Solution No. 2 Build a New Breakwater Connected to Ontario Place	Alternative Breakwater Solution No. 3 Build a New Breakwater Not Connected to Ontario Place	Alternative Breakwater Solution No. 4 Build a New Breakwater Off Marilyn Bell Park
TECHNICAL				
Potential ability of breakwater to protect watercourse from waves.	Provides no wave protection for entire watercourse.	Provides wave protection for entire watercourse.	Provides wave protection for most of watercourse except for eastern end (starting area) requiring the need for additional wave protection at this location.	Provides wave protection for entire watercourse.
Potential length of new breakwater.	No new breakwater.	Shortest length of new breakwater needed to be constructed plus potential closure at west end is 85 m long.	Longer length of new breakwater needed to be constructed plus potential closure at west end is 85 m long.	Shortest length of new breakwater needed to be constructed plus potential closure at west end is 55 m long and potential closure at east end is 110 m.
Potential for possible future public access along new breakwater.	No possible future public access provided.	Possible future public access provided via direct connection to Ontario Place.	Possible future public access would require a bridge or causeway structure to be built from Ontario Place.	Possible future public access would require a bridge to be built from the shore to the breakwater.
Potential need to modify Cowan Avenue outfall.	No modification required.	Modification required.	Modification required.	No modification required.
NATURAL ENVIRONMENT				
Potential long-term effects on existing aquatic features.	No long-term effects on aquatic features.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.
Potential effects on water quality within the watercourse.	Water quality within the watercourse remains unchanged.	Greater potential for reduced water quality within watercourse due to lack of water circulation because breakwater would be connected to Ontario Place and potentially closed at east end. This may be mitigated through the placement of pipes in the new breakwater to increase water circulation.	Less potential for reduced water quality within watercourse because eastern end of breakwater would not be connected to Ontario Place.	Greater potential for improved water quality within watercourse due to breakwater located greater distance offshore.
Potential for short-term construction related effects on aquatic features.	No short-term construction related effects on aquatic features.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.
Potential for short-term construction related effects on migratory birds.	No short-term construction related effects on migratory birds.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.
Potential effects on existing terrestrial features.	No effects on terrestrial features.	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).
SOCIAL ENVIRONMENT				
Potential short-term construction related effects on existing area residents, businesses, and/or events.	No short-term construction related effects on existing area residents, businesses, and/or events.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.
Potential effects on existing quiet water area for paddlers/rowers.	Existing quiet water area remains unchanged.	Largest quiet water area would be created for use by paddlers/rowers with closures at ends of breakwater.	A larger quiet water area would be created for use by paddlers/rowers.	Largest quiet water area would be created for use by paddlers/rowers with closures at ends of breakwater.
Potential effects on boat access to Ontario Place marina.	Boat access to Ontario Place marina remains unchanged.	Ontario Place marina access relocated to the west end of the new breakwater. Requires management of boats entering marina during course events.	Ontario Place marina access relocated to between end of new breakwater and Ontario Place shoreline. Requires management of boats entering marina during course events.	Boat access to Ontario Place marina remains unchanged.
Potential flexibility to accommodate future events.	No flexibility to accommodate future events.	Less flexibility to accommodate future events.	Less flexibility to accommodate future events.	Greatest flexibility to accommodate future events.
CULTURAL ENVIRONMENT				
Potential effects on underwater cultural/heritage resources.	No potential negative effects on underwater cultural/heritage resources.	Potential underwater cultural/heritage resources being determined through a Stage 2 Archaeological Assessment.	Potential underwater cultural/heritage resources being determined through a Stage 2 Archaeological Assessment.	Potential underwater cultural/heritage resources being determined through a Stage 2 Archaeological Assessment.
FINANCIAL				
Potential capital costs associated with the alternative.	No capital costs.	Less than Alternative #3 but more than Alternative #4 (detailed costing to occur once design has been finalized).	Most expensive (detailed costing to occur once design has been finalized).	Least expensive (detailed costing to occur once design has been finalized).
RANKING OF SOLUTIONS	**FOURTH**	**SECOND**	**THIRD**	**FIRST**

The four breakwater solutions were ranked in order of preference according to their net effects on the environment as presented below:

Rank	Alternative Breakwater Solutions
1st	**Alternative Solution No. 4: Build a New Breakwater Off Marilyn Bell Park**
2nd	**Alternative Solution No. 2: Build a New Breakwater Connected to Ontario Place**
3rd	**Alternative Solution No. 3: Build a New Breakwater Not Connected to Ontario Place**
4th	**Alternative Solution No. 1: Do Nothing**

Build a New Breakwater off Marilyn Bell Park was ranked first overall when compared to the other three alternatives because it possesses the following major advantages:

a) Provides wave protection for entire watercourse.
b) Requires the shortest length of new breakwater to be constructed.
c) Does not require modification to the existing Cowan Avenue Outfall.
d) Provides the largest quiet water area for use by paddlers/rowers (with closures at ends of breakwater).
e) Does not require a change to the existing Ontario Place marina boat access.
f) Provides the greatest flexibility to accommodate future events by allowing for expansion in either direction to fulfill course requirements for other water sports.
g) Estimated to be the least expensive.

Since Alternative Breakwater Solution No. 4 was ranked ahead of the previously recommended breakwater solution, it was selected as the preferred breakwater solution.

4.7.2 Preferred Cowan Avenue Outfall Solution

Since the preferred breakwater solution does not require the existing Cowan Avenue Outfall to be modified like the other two new alternative breakwater solutions required, the Do Nothing Alternative was selected as the preferred Cowan Avenue Outfall solution.

5. Phase Three: Identification and Evaluation of the Alternative Design Concepts for Implementing the Preferred Solution

5.1 Identification and Description of the Alternative Breakwater Design Concepts

Following the identification of Alternative Breakwater Solution No. 4 as the Preferred Breakwater Solution, three Alternative Design Concepts (breakwater designs) were developed for its implementation:

- **Alternative Design Concept No. 1: Rubble Mound Berm**
- **Alternative Design Concept No. 2: Rubble Mound Wide Armour**
- **Alternative Design Concept No. 3: Vertical Wall Concrete Caisson**

The following sections provide a description of each alternative design concept.

5.1.1 Alternative Design Concept No. 1 – Rubble Mound Berm Concept

A rubble mound breakwater is a mound of stones of different sizes and shapes, either dumped at random or placed in layers. A conventional rubble mound breakwater consists of a core of quarry run stone covered with layers of larger stone. The primary layers are the outermost or exterior layer and thus contain the largest and heaviest stone. Standard conventional design incorporates two layers of quarried armour stone in the primary layer, which are sized to remain static under design conditions (i.e., little or no movement).

The berm concept utilizes a wide berm, or multiple layers of smaller stone with a wider gradation. The berm is more porous and can even undergo some reshaping as its profile adjusts to the wave and water level conditions. Filter layers of intermediate sized stones are sometimes used between the core and primary armour to contain the smaller core material within the breakwater structure. Side slopes and armour units are designed so that the structure will resist the expected wave action and ice forces. Rubble mound breakwaters have been used extensively in the Great Lakes and are adaptable to any water depth and to most foundation conditions.

Considerations in the cross-section design include the overall geometry of the cross-section (such as crest elevation and width, which control wave transmission/overtopping), the requirement for filter and bedding layers, and the requirement for scour protection.

The rubble mound berm concept for the project site has a stone core and 3 to 4 layers of primary armour on the exposed or lakeside (**see Figure 19**). The front slope is 2:1 (horizontal:vertical) to reduce the amount of reshaping and stone movement. The crest height is +3 m above chart datum. The crest width is 10.5 m. The crest and rear slope armouring consist of 2 layers of 4 to 6 tonne armour stone. The base width varies with depth.

5.1.2 Alternative Design Concept No. 2 – Rubble Mound Wide Armour Concept

Alternative Design Concept No. 2 is a rubble mound breakwater with 2 layers of wide gradation armour for the outer primary layers (**see Figure 20**). The wide gradation consists of 3 to 12 tonne armour stone at a 1.75:1 slope. The crest height is +3.5 m above chart datum and the crest width is 7.9 m. A single layer of 6 to 12 tonne armour stone is used for the crest and rear slope armouring. The core is quarry run stone.

5.1.3 Alternative Design Concept No. 3 – Vertical Wall Concrete Caisson Concept

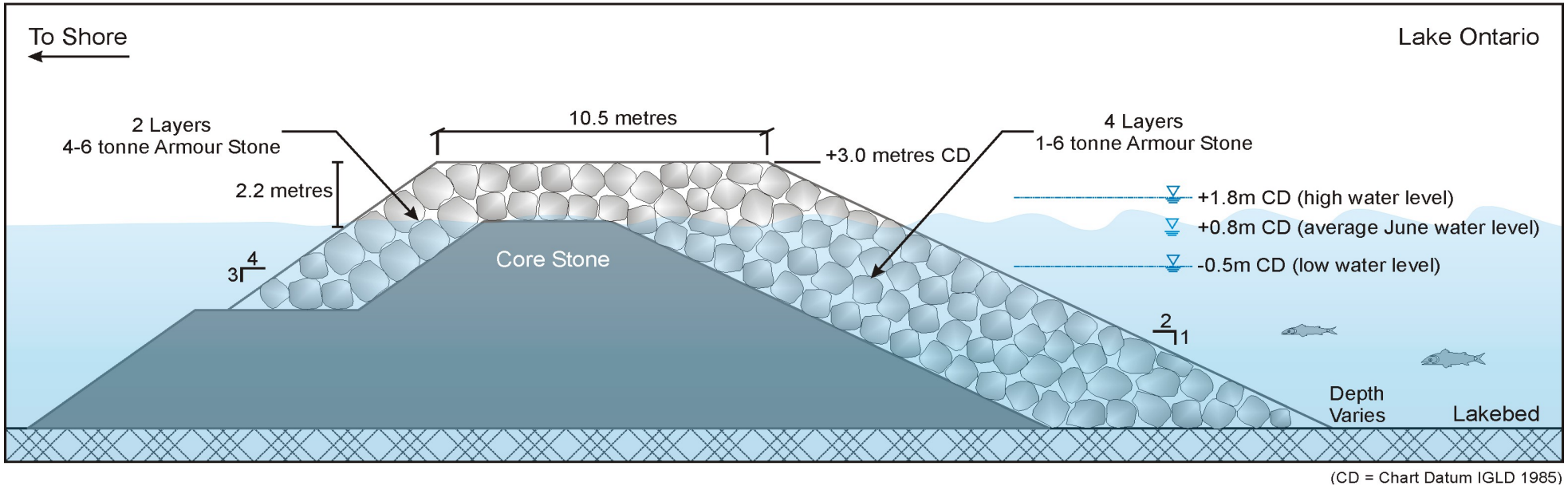
Alternative Design Concept No. 3 is a vertical wall concrete caisson (**see Figure 21**). A caisson is essentially a large box with a bottom and walls of reinforced concrete, which is cast onshore then floated out to the site. The caisson is sunk in a controlled manner onto a prepared stone bed and filled with ballast fill. A concrete cap is then cast-in-place. Toe scour protection is typically provided. The caisson must be designed to resist sliding and overturning due to wave and ice forces. The top width of the alternative caisson concept is 14 m with a crest height of +3 m above chart datum.

5.2 Evaluation of the Alternative Breakwater Design Concepts

5.2.1 Evaluation Methodology

Taking the existing environment into consideration, the three Alternative Design Concepts (breakwater designs) were comparatively evaluated using the same evaluation methodology applied to the alternative solutions in Phase Two: "net effects analysis" followed by a Reasoned Argument or Trade-off method.

In keeping with this methodology, evaluation criteria specific to the Alternative Design Concepts were developed and grouped within categories of consideration representing the broad definition of the environment as defined in the EA Act. The criteria, net effects analysis and the recommended Alternative Design Concept are presented in **Table 13**.



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Gartner Lee

Figure 19: Alternative Design #1: Rubble Mound Berm Concepts

Western Beaches Watercourse EA

Project 50170, May 2005

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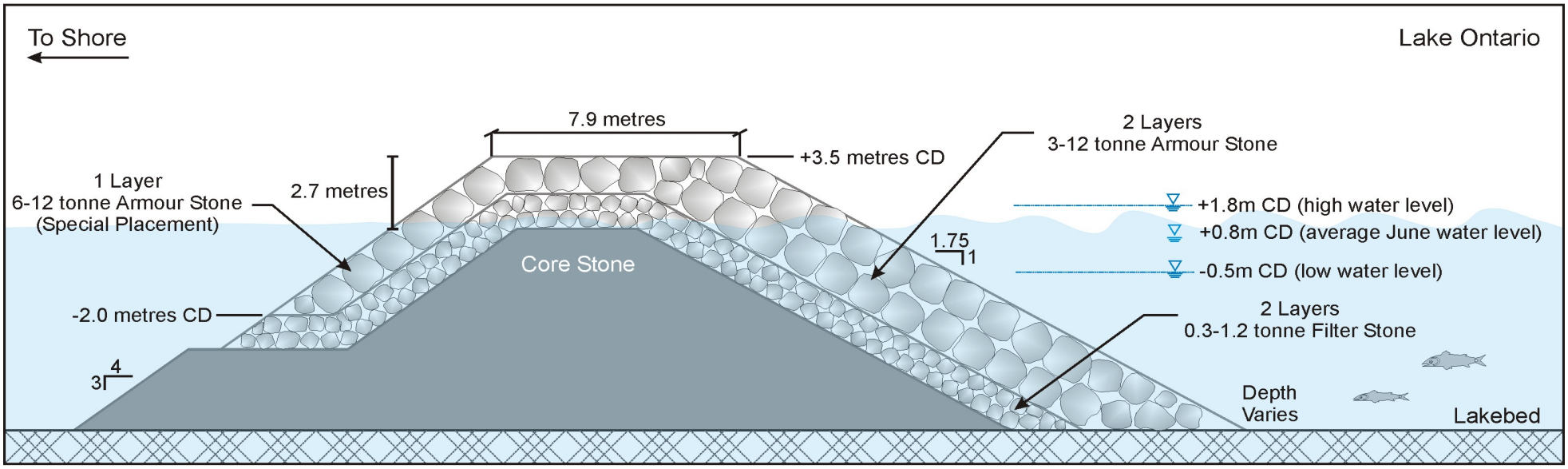

"Wide Armour" refers to wide range of armour size.

(CD = Chart Datum IGLD 1985)

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Figure 20: Alternative Design #2: Rubble Wide Armour Concept

Western Beaches Watercourse EA

Project 50170, May 2005

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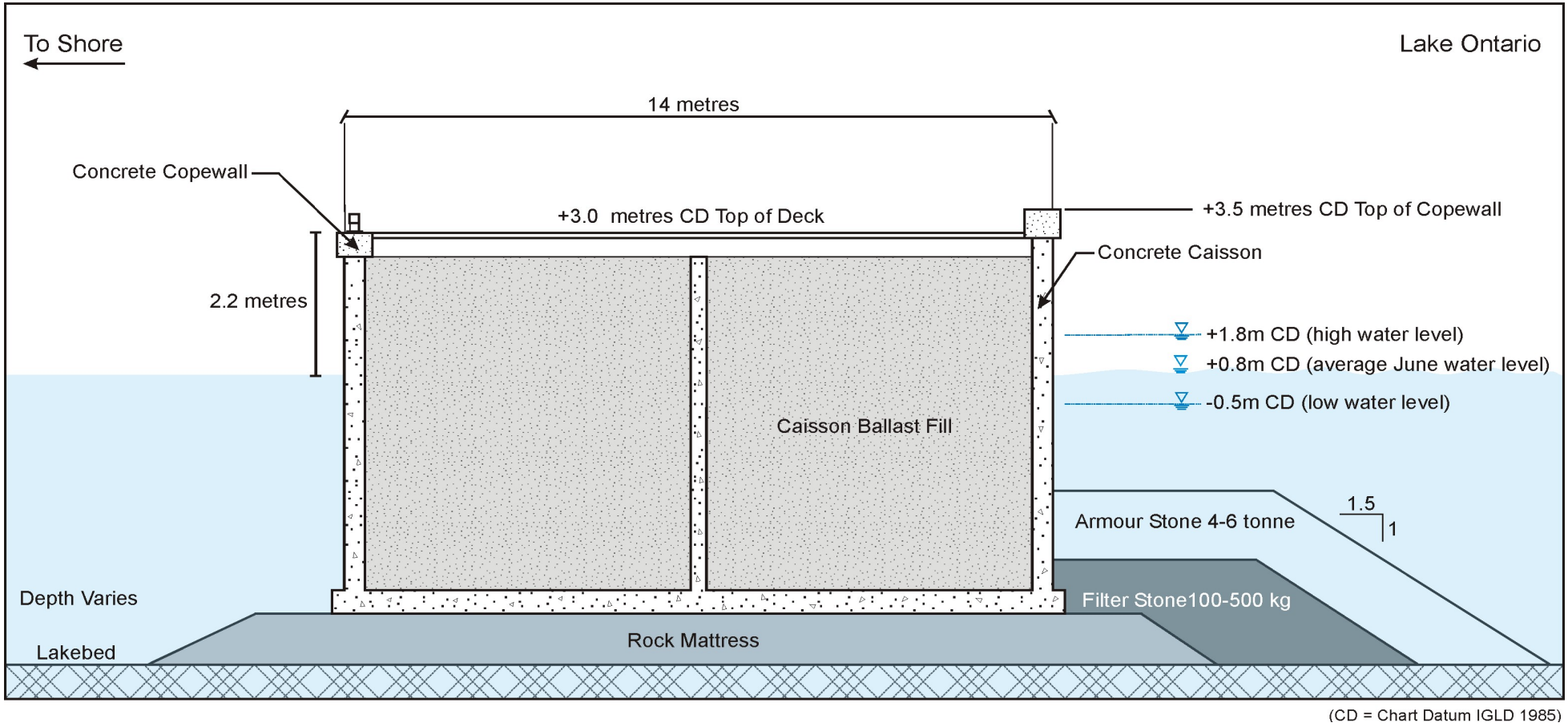

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Gartner Lee

Figure 21: Alternative Design #3: Vertical Wall Concrete Caisson Concept

Western Beaches Watercourse EA

Project 50170, May 2005

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Table 13. Evaluation Summary of Alternative Design Concepts

Category of Consideration / Evaluation Criteria	Alternative Design No. 1 Rubble Mound Berm Concept	Alternative Design No. 2 Rubble Mound Wide Armour Concept	Alternative Design No. 3 Vertical Wall Concrete Caisson Concept
TECHNICAL			
Potential breakwater performance	Higher breakwater performance (very good wave overtopping and wave transmission characteristics and very flexible structure with good reserve capacity (damage is progressive if design conditions exceeded)).	Higher breakwater performance (very good wave overtopping and wave transmission characteristics and very flexible structure with good reserve capacity (damage is progressive if design conditions exceeded)).	Lower breakwater performance (good wave transmission characteristics, but greater wave overtopping rate and rigid structure (damage is more sudden if design conditions exceeded)).
Potential construction techniques.	Conventional construction can be land-based or marine-based or combination.	Conventional construction can be land-based or marine-based or combination. . Requires more rigorous placement tolerances than berm concept and therefore more susceptible to construction downtime due to adverse weather conditions.	Marine-based construction only. Forming, launching and placing caissons have not been routinely carried out.
Potential for meeting material supply requirements.	Easier to meet material supply requirements (very large volume of armour stone and core stone required, but smaller size of armour required (1 to 6 tonne stones) which is easier to source than larger stones).	More difficult to meet material supply requirements (very large volume of armour stone and core stone required and larger size of armour required (3-12 tonne stones) which is more difficult to source than smaller stones).	Easier to meet material supply requirements (concrete and reinforcing steel have well-established sources, but large volume of caisson ballast stone required).
Potential for wave reflection within the watercourse	Lower wave reflection because of rough, permeable, sloping face of breakwater.	Lower wave reflection because of rough, permeable, sloping face of breakwater.	Higher wave reflection because of smooth, impermeable vertical wall of breakwater.
NATURAL ENVIRONMENT			
Potential loss of fish habitat	Largest loss of fish habitat, but would be compensated through habitat restoration and creation resulting in a net positive effect.	Second largest loss of fish habitat, but would be compensated through habitat restoration and creation resulting in a net positive effect.	Smallest loss of fish habitat, but would be compensated through habitat restoration and creation resulting in a net positive effect.
Potential for incorporating fish habitat compensation measures into the breakwater structure.	Good potential because of sloped, rocky sides.	Good potential because of sloped, rocky sides.	Least potential because of vertical, smooth sides.
Potential effects on existing terrestrial features.	Greater removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs), but would be mitigated through replacement (like-for-like on a one-for-one basis).	Greater removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs), but would be mitigated through replacement (like-for-like on a one-for-one basis).	Less removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) and would be mitigated through replacement (like-for-like on a one-for-one basis).
SOCIAL ENVIRONMENT			
Potential short-term construction related effects on existing area residents, businesses, and/or events.	Greater short-term construction related effects on existing area residents, businesses, and/or events, but would be minimized through the use of standard construction measures and schedule optimization.	Greater short-term construction related effects on existing area residents, businesses, and/or events, but would be minimized through the use of standard construction measures and schedule optimization.	Less short-term construction related effects on existing area residents, businesses, and/or events and would be minimized through the use of standard construction measures and schedule optimization.
FINANCIAL			
Potential capital costs associated with the alternative.	Approximately 5% greater than Alternative No. 2 (cost could increase due to limitations in stone supply).	Least cost provided large armour stone supply is available (greatest potential for stone sourcing difficulties and associated costs).	Approximately 10% greater than Alternative No. 2.
RANKING OF DESIGN CONCEPTS	**RECOMMENDED**	**SECOND**	**THIRD**

5.2.2 Ranking of the Alternative Breakwater Design Concepts

The Alternative Breakwater Design Concepts were ranked in order of preference according to their net effects on the environment as presented below:

Rank	Alternative Design Concepts
1st	**Alternative Design Concept No. 1: Rubble Mound Berm**
2nd	**Alternative Design Concept No. 2: Rubble Mound Wide Armour**
3rd	**Alternative Design Concept No. 3: Vertical Wall Concrete Caisson**

The following paragraphs provide a rationale for the ranking of each of the alternative design concepts.

- **First Ranked Alternative: Alternative Design Concept No. 1: Rubble Mound Berm**

  This alternative was ranked first for a number of reasons as discussed below:

  i) Technical

  In general, rock rubble mound structures have a number of key advantages over vertical concrete caissons:

  a) Durability – most rock sources withstand wear and attrition well and are ideally suited to the coastal environment.
  b) Porous, sloping faces – they absorb wave energy and reduce scour.
  c) Readily modified to take into account changing environmental conditions.
  d) Rock structures are flexible with a good reserve capacity – damage is progressive if design conditions are exceeded.

  Specifically, the technical advantages of Alternative Design Concept No. 1 are:

  a) The use of multiple layers of armour stone allows for a more relaxed construction placement tolerance than would be required for Alternative Design Concept No. 2, and therefore, marine-based construction activity is less prone to delays due to adverse wave conditions.
  b) There is less risk than Alternative Design Concept No. 2 of not meeting the material supply requirements. Although a greater volume of material is required, the smaller sizes of armour stone are more readily sourced than the large armour material required for Alternative Design Concept No. 2.

c) The porous, multiple layers of stone absorb wave energy well, resulting in very good wave overtopping and wave transmission characteristics (i.e., relatively low values of wave overtopping and wave transmission) compared to Alternative Design Concept No. 3.

d) Lower wave reflection within the proposed watercourse compared to Alternative Design Concept No. 3.

ii) <u>Natural Environment</u>

Aquatic Resources

This alternative is anticipated to have a slightly greater area of direct loss of fish habitat than Alternative Design Concept No. 2. The crest of the breakwater and part of the slope are the portions of the structure that would be above the water and hence no longer available for fish. The crest of the breakwater for this alternative will be approximately 10.5 m compared with the width of 7.9 m for the rubble wide armour concept (Alternative Design Concept No. 2). The direct loss of habitat would be approximately 16.8 m^2 per metre of breakwater. Additional compensation measures can be implemented to offset this slightly greater area of direct loss. The crest of the vertical wall concrete caisson concept (Alternative Design Concept No. 3) would be the least at 14 m^2 per metre of breakwater.

The area of footprint that is below the highwater mark is considered habitat that is 'directly modified' in the calculation of area of fish habitat alteration. In this case, the structure results in a change in water depth and substrate composition. A direct alteration of habitat often provides conditions more favourable to resident fish communities and could be considered a benefit of certain types of development. In this case, a greater area of shallow water is created and structure will be present where none existed previously. The use of rock and the sloped sides of the preferred design and Alternative Design Concept No. 2 are amenable to the incorporation of fish habitat into the breakwater design as part of the habitat compensation works. These alterations to habitat are addressed in greater detail in Section 6.2.11.

Terrestrial Resources

Although this alternative has the potential for a greater removal and/or disturbance to terrestrial features from construction staging requirements than Alternative Design Concept No. 3, the affected terrestrial features are limited to grass, trees, and shrubs associated with Marilyn Bell Park, which would be mitigated though replacement. This could result in improvements to the park.

iii) Social Environment

Although it is anticipated that this alternative will have greater short-term construction related effects on existing area residents, businesses, and/or events because a larger land-based staging area is required than Alternative Design Concept No. 3, the effects would be minimized through the use of standard construction measures to reduce noise, dust, odours, etc., and through schedule optimization to minimize the duration of the construction. In addition, consideration would be given to suspending construction activities during major waterfront events, and avoiding conflict with existing land-based activities.

iv) Financial

It is anticipated that Alternative Design Concept No. 1 will be slightly more expensive than Alternative Design Concept No. 2, but less expensive than Alternative Design Concept No. 3; however this is only an estimate at this time. There are two key factors determining the overall cost: the cost of the stone; and the cost of placing the stone.

Alternative Design Concept No. 1 requires a greater volume of stone than Alternative Design Concept No. 2. However, the unit price (e.g., $/tonne) for the supply of the smaller stone required for Alternative Design Concept No. 1 is expected to be lower than the unit price for the larger stone required for Alternative Design Concept No. 2 because the smaller size and wider gradation of the smaller stone is typically more readily available.

Construction, or placement costs for the two concepts will differ according to their specified tolerance. Alternative Design Concept No. 2 uses two layers of stone and the placement tolerance is stricter than the tolerance for Alternative Design Concept No. 1, which uses four layers of stone. Conformance with the tighter tolerance results in slower placement for Alternative Design Concept No. 2 as each stone requires more time to place in its final position.

In addition, the tighter tolerance puts a greater restriction on the operational wave conditions during construction leading to potentially more downtime and higher costs. However, the higher expected placement cost for the larger stone in Alternative Design Concept No. 2 due to the stricter tolerance will be offset somewhat by the shorter time required to place the lower volume required for Alternative Design Concept No. 2.

Therefore, although the estimated capital costs of Alternative Design Concept No. 1 is slightly higher than Alternative Design Concept No. 2, the potential risk of the costs escalating is less.

- **<u>Second Ranked Alternative</u>: Alternative Design Concept No. 2: Rubble Mound Wide Armour**

While this alternative is very similar to Alternative Design Concept No. 1, it does not provide the extent of advantages as the first ranked alternative. The rationale for ranking it second is provided as follows:

i) <u>Technical</u>

Although this alternative has the same general advantages of a rock rubble mound structure that were outlined for Alternative Design Concept No. 1, it has the following disadvantages associated with it as compared to Alternative Design Concept No. 1:

a) It requires a great volume of quality armour stone material. While this volume is less than Alternative Design Concept No. 1, it is of a larger size that is more difficult to source. Therefore, there is a much greater risk that a limited supply of stone could potentially delay the construction schedule.

b) The placement tolerances for the armour layer are stricter than the tolerances for Alternative Design Concept No. 1. Therefore, it is more prone to construction downtime and schedule delays due to adverse weather conditions.

ii) <u>Natural Environment</u>

Aquatic Resources

This alternative is expected to have a slightly smaller area of direct loss of fish habitat compared with Alternative Design Concept No. 1. The area of the breakwater crest was addressed in the preceding discussion on the first ranked alternative design concept. Direct impacts to fish habitat such as changes in depth and substrate composition, which may be considered beneficial in many respects would be slightly less for this alternative than for Alternative Design Concept No. 1.

Terrestrial Resources

This alternative and Alternative Design Concept No. 1 are anticipated to have similar construction staging requirements and therefore similar disturbance to the terrestrial features within Marilyn Bell Park, which would be mitigated through replacement and could result in improvements to the park.

iii) Social Environment

This alternative is expected to have the same short-term construction related effects on existing area residents, businesses, and/or events as Alternative Design Concept No. 1 because its construction would also require a land-based staging area. As in the case of Alternative Design Concept No. 1, the effects would be minimized through the use of standard construction measures to reduce noise, dust, odours, etc., and through schedule optimization to minimize the duration of the construction. In addition, consideration would be given to suspending construction activities during major waterfront events, and avoiding conflict with existing land-based activities.

iv) Financial

It is estimated that Alternative Design Concept No. 2 will be the least expensive alternative. However, as with Alternative Design Concept No. 1, the capital cost is very difficult to estimate and is greatly influenced by the cost of stone. In the case of Alternative Design Concept No. 2, the risk is even greater than Alternative Design Concept No. 1 because it requires larger armour stone that is more difficult to source and therefore more susceptible to price increases.

- **Third Ranked Alternative: Alternative Design Concept No. 3: Vertical Wall Concrete Caisson**

Alternative Design Concept No. 3 was ranked third for the following reasons:

i) Technical

Although this alternative has the advantages of not being constrained by the potential for a limited supply of quality armour stone, it has several disadvantages associated with it when compared to rubble mound designs:

a) lower breakwater performance;
b) limited to marine-based construction only; and
c) the vertical sides reflect waves resulting in undesirable wave conditions for the users of the watercourse.

ii) Natural Environment

Aquatic Resources

This alternative is expected to have a smaller area of direct fish habitat loss compared with the other two alternative design concepts. The area of the breakwater crest was addressed in the preceding discussions. However, the vertical walls of this design concept provide little opportunity for incorporation of fish habitat compensation measures into the breakwater design.

Terrestrial Resources

The marine-based construction techniques associated with this alternative would result in less removal and/or disturbance to the existing vegetation within the park as compared to both Alternative Design Concept Nos. 1 and 2.

iii) Social Environment

From a social environment perspective, this alternative should have less short-term construction related effects on existing area residents, businesses and/or events compared to the other two Alternative Design Concepts because while it does require a land-based staging area, the duration of the construction will be shorter. Therefore, the potential for adverse construction related effects will occur for a shorter time period.

As with the other two Alternative Design Concepts, the effects would be minimized through the use of standard construction measures to reduce noise, dust, odours, etc., and through schedule optimization to minimize the duration of the construction. In addition, consideration would be given to suspending construction activities during major waterfront events, and avoiding conflict with existing land-based activities.

iv) Financial

Alternative Design Concept No. 3 is the most expensive alternative.

5.2.3 Recommended Breakwater Design Concept

Alternative Design Concept No. 1, Rubble Mound Berm, provides the greatest number of advantages when comparatively evaluated against the other two alternatives. Specifically, as a rubble mound design it is very durable (rock) and the porous, multiple layers of stone absorb wave energy well resulting in relatively low values of wave overtopping and wave transmission. In comparison to Alternative Design Concept No. 2, this alternative has the advantages of a more relaxed construction placement tolerance (construction is less prone to delays from wave conditions) and smaller stone requirements (less risk of supply delays).

Both Alternative Design Concept Nos. 1 and 2 will provide lower wave reflection within the proposed watercourse compared to Alternative Design Concept No. 3.

The rubble design of Alternative Design Concept No. 1 provides greater potential for incorporation of fish habitat compensation measures. Area of direct habitat lost is greater for Alternative Design Concept No. 1 than for No. 2 due to the slightly larger footprint. Any other impacts will be overcome through the

development of the fish habitat compensation plan in conjunction with DFO. Other aspects of the natural environment such as terrestrial and wildlife resources are similar for both Alternative Design Concept Nos. 1 and 2 but more advantageous than for Alternative Design Concept No. 3.

Although both Alternative Design Concept Nos. 1 and 2 are expected to have greater construction related effects on area residents, businesses and events than Alternative Design Concept No. 3 because of the greater land based staging requirement, the effects are short-term and will be minimized through schedule optimization, noise, dust and odour mitigation and avoiding conflict with existing land-based activities.

Consequently, Alternative Design Concept No. 1 was identified as the recommended design concept for implementing the preferred breakwater solution.

5.3 Phase Three Consultation Activities

5.3.1 Notification of Public Information Centre No. 2

The Phase Three consultation activities included notification of the second PIC. The "Notice of Public Information Centre #2" was mailed on March 24, 2005 to those on the project's contact database, including all relevant government review agencies, politicians, local boating clubs, etc. The same notice was published in The Toronto Star on March 31, 2005 and April 4, 2005 to inform the general public, and was also placed on the TWRC website (www.towaterfront.ca). The notices described the purpose of the project, outlined the EA process being followed, identified the upcoming PIC, and requested comment. A copy of the notice is contained in **Appendix H**.

5.3.2 Written Comments Received

Written comments were received throughout the project. All comments were reviewed and incorporated into the study where applicable. The following list provides a summary of the issues raised in written comments received following PIC No. 2 to the end of the project:

- Remediation of breakwater in areas of poor repair.
- Request for additional information.
- Construction staging and scheduling.
- Breakwater design.
- Protect fish habitat.
- Length of watercourse.
- Safety concerns.
- Height of watercourse.

- Ownership and management of watercourse following 2006 event.
- Sailboat mooring.
- TWRC's Sustainability Framework.

A summary of the comments received, including when they were received, can be found in the table at the start of **Appendix D**. A copy of the actual correspondence received can be found in chronological order following the summary table in **Appendix D**.

5.3.3 Public Information Centre No. 2

As part of Phase Three of the Class EA planning and design process, a second PIC was held on April 5, 2005 in the Council Chambers at Metro Hall from 6:00 p.m. to 9:00 p.m.. PIC No. 2 was held to present the fourth alternative breakwater solution and the revised evaluation summary of it with the other three alternatives; the identification of the preferred breakwater solution; the alternative design concepts developed for implementing the preferred breakwater solution; the evaluation of the alternative design concepts; identification of the recommended design concept; and the next steps. As part of PIC No. 2, a presentation of the information was given at 7:00 p.m. to provide an overview of the project history, discuss the new Alternative Breakwater Solution that was added, and discuss the Alternative Design Concepts outlined in the display materials.

A copy of the display materials available at PIC No. 2 and the presentation slides can be found in **Appendix I**.

The objective was to provide the PIC No. 2 attendees an opportunity to offer their comments on the material being presented, and discuss them directly with the Project Team. This included a Question & Answer session following the formal presentation.

A total of 76 people attended PIC No. 2, and 4 comment forms were submitted. The following provides a summary of the written comments received at PIC No. 2:

a) Glad to see "multi-sport" perspective incorporated into the final product.

b) Concerns regarding construction schedule and impact on Argonaut Rowing Club operations.

c) Protection from waves and swells is critical.

d) The long-term course management and jurisdiction associated with the watercourse need to be resolved.

e) Question about the impact of the watercourse on existing marine traffic, and the measures required to address any adverse effects.

A copy of the comment forms submitted are contained in **Appendix J**.

Apart from the written comments received, attendees at PIC No. 2 voiced their issues and concerns during a Question & Answer session following the formal presentation. The following provides a summary of the key issues voiced during the Question & Answer session:

a) The location of the breakwater (e.g., distance from shore, distance from Ontario Place) and what it is going to look like (viewscape from shore, including height above water).

b) How does the breakwater project fit into the TWRC's Sustainability Framework, specifically with regard to habitat improvement today and in the future? There is a desire to use the new breakwater to create new habitat and to add to the sustainability of the environment in the area.

c) Perhaps the design could emulate the flow of the existing shoreline rather than being straight (i.e., add curves).

d) Concerned about boating traffic within the new breakwater and how it will change compared to the current situation. There may be some safety issues because of boating traffic at the ARC.

e) Types of facilities planned for this watercourse.

f) Support the relocation of the watercourse further west to its currently proposed location. There was a request to move it further west, and a request to move it back east towards Ontario Place.

g) Concerned about the need to accommodate sail boat moorings inside the new breakwater.

h) Concerned about construction of the breakwater, specifically timing and staging.

A summary of the verbal comments received and the responses provided are presented in **Appendix K**.

5.4 Identification of the Preferred Breakwater Design Concept

Since there was no opposition raised to the recommended Design Concept (rubble mound berm) presented at PIC No. 2, it was confirmed as the preferred design concept for the project.

6. Environmental Assessment

Following confirmation of the preferred breakwater design concept, a screening level environmental assessment in accordance with the CEA Act was preformed as documented in this section.

6.1 Environmental Assessment Methodology

The assessment of potential effects of the Western Beaches Watercourse project was conducted as a series of progressive steps described below.

6.1.1 Identification of Project / Environment Interactions

Each of the Western Beaches Watercourse project works and activities was considered in a context of the individual sub-components of the environment to determine if there was a plausible mechanism for the project to interface with the environment. **Table 14** provides the project-environment interaction matrix developed for this project.

Potential interactions were re-considered during the effects assessment studies based on the refined definition of the project that had resulted from the consideration of alternative means of its implementation.

6.1.2 Identification of Likely Effects and Mitigation Measures

Each potential interaction between the Western Beaches Watercourse Facility project and the environment was considered individually to determine if it would be likely to result in a measurable change to the environment. For the purposes of the EA, a measurable change was defined as a change in the environment that is real, observable or detectable compared with existing conditions. A predicted change that was well below applicable criteria or indistinguishable from background was considered not measurable.

Each potential project-environment interaction considered likely to result in a measurable change to the environment was evaluated to identify the likely effect of the change on the environmental components and their associated valued ecosystem components (VECs). In most cases, these interactions were considered collectively, rather than individually. The consideration of potential effects of the project on the sustainable use of resources considered effects on both non-renewable and renewable resources potentially affected by the project.

Table 14. Possible Project-Environment Interactions

Components	Physical Environment					Biological Environment							Socio-Economic Environment						Cultural Environment	
	Coastal Process	Terrain and Topography	Soils and Sediments	Surface Water Quality & Quantity	Groundwater Quality and Quantity	Wildlife / Habitat	Species at Risk	Vegetation and Wetlands	Migratory Birds	Fish and Fish Habitat	Air Quality and Climate Change	Noise / Vibration	Local Economy	Tourism and Recreation	Visual Setting	Land Use	Human Health	Transportation and Navigation	Heritage / Archaeology	Aboriginal Interests
Site Preparation																				
Removal of Existing Breakwater	✓		✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	
Construction Activities																				
Construction of a New Breakwater	✓		✓	✓		✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Construction of Aquatic Habitat *(fisheries compensation)*			✓	✓			✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Construction of Land Based Ancillary Facilities *(both temporary and permanent)*		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Operational Activities																				
Maintenance of the New Breakwater				✓		✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
Decommissioning																				
Removal / Decommissioning of the New Breakwater							✓		✓	✓				✓	✓					✓
Removal / Decommissioning of the Land-Based Ancillary Facilities		✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		

The assessment of potential effects of the environment on the project was fundamentally a consideration of how conditions (e.g., extreme weather, wave action, ice conditions) might alter the project such that there may be consequential effects on the environment.

A cumulative effect is an effect of the project in combination with effects of other projects or activities that have been or will be carried out and that will overlap in space and time with those of the Western Beaches Watercourse project. The process for assessing cumulative effects involved the following steps:

a) determining if the project is likely to result in residual adverse environmental effects;

b) determining if the residual effects of the project are likely to coincide (in space and time) with similar effects of other projects or activities, either past, existing or foreseeable into the future;

c) consider if the coincidental effects are likely to result in cumulative effects on the environment (as represented by the selected VECs) now or in the foreseeable future;

d) consider additional mitigation measures to further ameliorate the adverse cumulative effects and determine the cumulative effects likely to remain after mitigation (i.e., residual adverse cumulative effects); and

e) evaluate the significance of residual adverse cumulative effects (if any).

Possible means to mitigate the likely adverse effects that were technically and economically feasible were identified. To a large extent, mitigation measures were identified that represent design features, good environmental practices, operational procedures and contingency plans.

6.1.3 Identification of Residual or Net Effects

Assuming implementation of the mitigation measures, the likely adverse effects were evaluated to determine whether or not a residual or net effect would remain after mitigation. This judgement was based on the likely effectiveness of the mitigation measures that were recommended. All residual adverse effects were advanced for an evaluation of their significance.

6.1.4 Assessment of Significance

The significance of residual adverse effects of the Western Beaches Watercourse project on the environment, including its cumulative effects (if any) were evaluated individually considering the following criteria: magnitude, geographic extent, duration, frequency and permanence. Based on the application of these criteria, residual adverse effects were categorized as: negligible (not significant),

minor adverse effect (not significant) and significant adverse effect. The significance of the residual adverse effects of the environment on the project was evaluated based on the professional judgment of the environmental specialists considering appropriate qualitative references.

6.1.5 Summary of Overall Advantages and Disadvantages

On the basis of the assessment results (i.e., residual or net effects), the overall advantages and disadvantages of the project are summarized.

6.2 Likely Environmental Effects

For the purposes of this EA, the **Physical Environment** includes the following environmental components:

a) Coastal Processes;
b) Terrain and Topography;
c) Soils and Sediment;
d) Surface Water Quality and Quantity; and
e) Groundwater Quality and Quantity.

The **Biological Environment** includes the following environmental components:

a) Wildlife Habitat;
b) Species at Risk;
c) Vegetation and Wetlands;
d) Migratory Birds;
e) Fish and Fish Habitat;
f) Air Quality and Climate Change; and
g) Noise/Vibration.

The **Socio-economic Environment** includes the following environmental components:

a) Land Use;
b) Local Economy;
c) Tourism and Recreation;
d) Visual Setting;
e) Human Health; and
f) Transportation and Navigation (including ground traffic, recreational boating and navigation, and commercial navigation).

The **Cultural Environment** includes the following environmental components:

a) Heritage/Archaeology (including both terrestrial and maritime components); and
b) Aboriginal Interests.

The Western Beaches Watercourse project works and activities determined to have a plausible interaction with the these components were identified by a check mark (✓) on **Table 14.** The following sections identify the likely environmental effects, mitigation measures and residual effects of the project on these environmental components and their associated VECs.

6.2.1 Effects on Coastal Processes

It is plausible that the project might affect long-shore transport of sediments during construction or operation. However, because there are minimal sediments available to be transported in the study area and because the entire shoreline within the study area has been artificially altered by the lakefilling and the construction of shoreline structures and offshore breakwaters, measurable changes in the overall patterns of erosion or deposition of sediment along the Lake Ontario shoreline are not anticipated. Nevertheless, positioning of the new breakwater offshore of the existing breakwater may result in some deposition of sediment at the junction where the ends of the new breakwater will be connected to the existing breakwater.

The project will not affect the monthly mean and storm surge water levels within Lake Ontario and Humber Bay during construction or operation, but the proposed breakwater will alter existing wave action within Humber Bay. Incoming waves will continue to reflect off the existing breakwater, however as a result of the Western Beaches Watercourse project, less wave energy will reflect from the proposed structure due to the rough, permeable, sloping armour stone. Although the effect will extend lakeward from the proposed breakwater, this change is not likely to be measurable over the baseline conditions.

At present, as wave heights and water levels increase, wave energy overtops the existing breakwater and is transmitted through gaps and damaged portions of the existing structure. This results in wave agitation on the leaside of the existing breakwater. The proposed breakwater will be higher and more effective in reducing the amount of wave overtopping and wave transmission. Following completion, the breakwater will provide an increased area of quiet water during periods of stormy weather immediately on the leeside of the breakwater for the length of the breakwater.

Relative to the overall water levels within Humber Bay and the existing conditions behind the existing breakwater, this effect will be limited to the immediate project area. Overall the effect of the breakwater on the wave action on the leeside of the breakwater is considered to be beneficial.

Recommended Mitigation Measures

Because adverse effects on coastal processes are not likely to be measureable and because the project will improve wave conditions on the leeside of the breakwater, additional mitigation measures are not warranted.

6.2.2 Effects on Terrain and Topography

It was hypothesized that the construction of land-based ancillary facilities and the use of Marilyn Bell Park as a construction staging area could adversely affect terrain the topography. However, given that construction activities will be undertaken on the relatively flat area of Marilyn Bell Park and that no major excavations are required, there is little potential for the project to result in changes in slopes, landforms and landscape diversity.

Recommended Mitigation Measures

The following measures are recommended to ensure that adverse effects on terrain and topography will not occur:

a) Ensure any backfilling that might be required is undertaken using suitable materials free of contaminants and fines; free of ice and frozen soils and that adequate soil compaction is conducted to avoid ground subsidence.

b) Provide additional backfill (if necessary) where subsidence has occurred and ensure that soils susceptible to frost heave (generally fine sands to silty soils) are not used for backfill.

6.2.3 Effects on Soils and Sediment

Physical works and activities associated with the construction staging area within Marilyn Bell Park will likely result in increased soil exposure resulting in erosion and sedimentation. Heavy machinery and vehicle movement will likely cause rutting and compaction of the soil surface. Disruption to sediment within the area of the existing breakwater and the new breakwater is primarily bedrock and neither of these works will physically alter this substrate.

Recommended Mitigation Measures

The following measures are recommended to mitigate the adverse effects on soils and sediment::

a) stabilize all work areas immediately following completion of construction, maintenance or decommissioning works to prevent erosion and transport;

b) leave sediment and erosion control measures in place until all disturbed areas have been stabilized;

c) facilitate the revegetation of any disturbed areas immediately following completion of works;

d) establish minimum setbacks from Lake Ontario for stockpiles and stabilize to prevent erosion;

e) use clean granular fill for landscaping work;

f) backfill and compact excavations (if necessary) as soon as possible, and optimize the degree of compaction to minimize erosion as well as to allow for the establishment of vegetation;

g) remove all construction materials and equipment after completion of construction activities;

h) direct runoff away from exposed soil and keep runoff velocities low;

i) apply wet weather restrictions on construction activities, where possible;

j) install and maintain silt and sediment controls as required, and monitor these controls to ensure they function effectively for the duration of the work phase.

6.2.4 Effects on Surface Water Quality and Quantity

The project does not involve adverse modifications to surface drainage patterns that might affect stormwater runoff volumes or the rate of runoff. However, many of the activities associated with the site preparation, construction and decommissioning of the breakwater have the potential to adversely affect surface water quality, if not mitigated.

Primarily, water quality may be affected by increased sediment loading to the lake from on-shore works and activities, and increased turbidity from offshore works and activities. For example, during the site preparation phase for the new breakwater, some sediments will likely be suspended during the initial placement of the breakwater material. Although the lake bottom in the area where the proposed breakwater is to be constructed has little sediment, the migration of the sediments that are present will result in murky water in areas immediately adjacent to the construction activity. Given that only quarried stone products are to be used, the increase in turbidity from the stone itself is expected to be low, short-lived and limited to close to the breakwater structure. Increased turbidity is not expected to be noticeable at any of the western beaches.

Surface water quality might also be affected should the project result in changes to internal water circulation patterns or those outside of the new breakwater. When the MW watercourse is operating in

2006, the Western Beaches tunnel will also be operating and the *E. coli* readings should be reduced significantly. The Western Beaches tunnel, which has been constructed and will be put in operation for the summer of 2005, has the capacity to intercept over 95,000 m^3 of combined sewer overflow and stormwater from the outfalls previously discharging to the Western Beaches. The outfalls overflowing to the lake will be reduced to Glendale Avenue, Cowan Avenue and Strachan Avenue. The Jameson Avenue outfall will not be used for overflow to the tunnel but only under maintenance or emergency operations. Although the Cowan Avenue outfall will still be active, the tunnel has been designed not to overflow more than twice during an average year, hence the elevated levels of *E. coli* will be significantly reduced in this area during wet weather flow conditions.

The construction of the new breakwater is farther out in Lake Ontario than the existing one. This location should enhance the internal circulation of water in the nearshore area resulting in improved water quality due to the increase in the volume of water and greater average depth. Nevertheless, the location of the new breakwater will create a larger area of quiet water that may result in the extension of the slightly eutrophic conditions that currently occur within the existing breakwater area outwards into the lake on the leeside of the new breakwater. The area where increased nutrients in the water might be measureable will be nearest the new breakwater.

Measureable changes in nutrient levels in the waters along the existing shoreline are not likely to occur. The increased area where eutrophic conditions might occur will enhance the productivity of the aquatic habitat nearest the new breakwater, but is not likely to be at levels that would be noticeable to people using the nearshore area on the leeside of the new breakwater. As such, the only areas of potential reduced circulation and water quality concerns may be at the east and west connections to the existing breakwater where sharp bends occur.

The construction of the new breakwater would not have any adverse impacts on the outside circulation and water quality. The wave actions that normally occur in the lake will continue to promote circulation and maintain existing water quality outside of the breakwater. Mitigation measures that would be undertaken to improve the circulation and water quality inside the new breakwater would also enhance these aspects on the outside.

Recommended Mitigation Measures

The following mitigation measures are recommended to mitigate the adverse effects to surface water quality:

a) avoid in water work during storm conditions; and
b) ensure all materials placed below the high water mark are clean and free of silt and clay sized particles.

Additional measures to minimize adverse effects to surface water quality include:

a) all materials to be placed in Lake Ontario must meet provincial guidelines governing placement of fill in water bodies;
b) avoid operating heavy equipment below water level; and
c) ensure all equipment that comes into contact with surface waters is free of leaks and is sufficiently cleaned and degreased.

Mitigation measures that would be considered during the detailed design stage as contingencies to minimize adverse effects on water quality due to changes in internal water circulation, include:

a) construction of underwater flow through pipes;
b) temporary connection to the existing breakwaters that would be used only during events; and
c) physical rounding of corners, etc.

These mitigation measures are being investigated as part of detailed design. Consultation with both federal and provincial authorities will be undertaken to confirm the need for these contingency measures.

6.2.5 Effects on Groundwater Quality and Quantity

Measurable effects on groundwater quality and quantity are not anticipated during normal operations. The project does not involve the taking of groundwater or any major excavations that would result in changes in groundwater flow patterns, recharge and levels in aquifers, nor the yields of wells. The nearest groundwater well is at least 2.5 km away from Marilyn Bell Park. Effects on groundwater quality resulting from a spill or leak are discussed in Section 6.5.1 – Environmental Effects of Possible Malfunctions or Accidents.

No mitigation measures are recommended for groundwater quality and quantity as no impacts are anticipated.

6.2.6 Residual Effects on the Physical Environment

Taking into account the identified mitigation measures, the residual adverse effects of the Western Beaches Watercourse project on the Physical Environment are the probable increase in sediment deposition at the junction where the ends of the new breakwater will be connected to the existing breakwater, short-term slightly increased turbidity in the immediate vicinity of the new breakwater during its construction and an extension of the slightly eutrophic conditions that currently occur within the existing breakwater area outwards into the lake on the leeside of the new breakwater.

All other potential adverse effects are not likely to be measurable over baseline conditions. The project will result in one beneficial effect on coastal processes, namely, increased area of quiet water on the leeside of the breakwater during periods of stormy weather.

6.2.7 Effects on Wildlife Habitat

With the removal of the existing breakwater, the new breakwater has the potential to provide additional loafing habitat for common shorebirds. However, the existing breakwater has never supported nesting habitat for the provincially significant Great Black-backed Gull or the Caspian Tern (Lepage pers. Comm. 2005). Construction of the new breakwater and ongoing maintenance is expected to cause only minimal disturbance to wildlife habitat as no dredging of overburden or blasting will be required. Disturbance is likely to be caused by the operation of heavy machinery and human presence. The construction staging area is proposed to be within a portion of Marilyn Bell Park. Clearing and grubbing activity in the park as well as the ongoing construction will likely cause some disturbance to local wildlife. Marilyn Bell Park supports urban-tolerant species and there are many other areas in the vicinity of Marilyn Bell Park that could be used by local wildlife. Therefore it is not likely that measurable effect to the use of the waterfront by these species would occur. Removal and decommissioning of the land-based ancillary facilities is not expected to affect wildlife habitat within the park as these structures would be present only for the duration of the CCWC event.

Recommended Mitigation Measures

The following mitigation measures are recommended to minimize effects to wildlife and wildlife habitat:

a) remove existing breakwater outside nesting season in the event that nesting is occurring. This measure is addressed in more detail in the migratory birds section;

b) existing habitat should remain accessible during construction; and

c) add wires along the length of the new breakwater to discourage the use of the structure by birds as a contingency measure if loafing birds become a management issue.

6.2.8 Effects on Species at Risk

No effects on Species at Risk are likely because no such species have been identified within the study area. No critical habitat for species at risk has been identified within the study area, and given the heavily urbanized environmental setting, the use of the area by such species is considered unlikely.

Recommended Mitigation Measures

No mitigation measures are recommended for Species at Risk as no adverse effects are anticipated.

6.2.9 Effects on Vegetation and Wetlands

Effects to vegetation from the clearing and grubbing will be limited to disruption to grassed areas, individual trees and shrubs planted in the Marilyn Bell Park to accommodate the construction staging areas. The size of the staging area will need to be large given the magnitude of the construction project. This may result in a decrease in function and habitat quality during the construction phase and at least one growing season after construction has ceased. These effects are expected to be limited to Marilyn Bell Park. Indirect effects to vegetation could result from fuel spills, stockpiles and other construction activities. No wetlands are present in the study area, therefore no effects on wetlands will occur.

Recommended Mitigation Measures

The following mitigation measures are recommended to minimize effects to vegetation that may result from the construction of the Western Beaches Watercourse. These measures represent good environmental practices that should be implemented:

a) limit clearing and grubbing to necessary areas;
b) minimize physical damage to vegetation by limiting stockpiling as much as possible;
c) mark and fence trees to be protected;
d) mark and fence staging area edges to limit affected area;
e) use mechanical vegetation controls where practical;
f) re-store area following construction by planting a variety of locally sourced native species; and
g) capture, contain and clean up any spills immediately.

In addition to the mitigation measures identified above, the TWRC will examine the feasibility, advantages and disadvantages of incorporating vegetation into the breakwater design during its detailed design, taking into consideration the budget constraints associated with this project. It is noteworthy, that the incorporation of vegetation into the design would serve to enhance the habitat value of the new breakwater, but may result in other adverse effects on the environment and may constrain the operation of the watercourse facility.

6.2.10 Effects on Migratory Birds

The *Migratory Birds Convention Act* was implemented in 1994 to protect migratory birds and their nests. Migratory birds as defined under this Act, include most of the breeding birds in southern Ontario. The removal of vegetation and the existing breakwater could result in the removal of nesting migratory birds and their nests if vegetation removal is not undertaken at certain times. The only potential breeders identified by the Ontario Breeding Bird Atlas (OBBA) are the Great Black-backed Gull and the Caspian Tern and breeding records of these species are from Tommy Thompson Park, which is located at a distance greater than 6 km from the project site. Neither of these species is known to have nested on the existing breakwater (Lepage, pers. comm. 2005). Because of the larger surface area of the new breakwater, there is a possibility that shorebirds such as cormorants, gulls and Black-crowned Night Herons would use the new breakwater for loafing.

Recommended Mitigation Measures

No mitigation measures are recommended as no adverse effects on migratory birds are anticipated. If loafing birds become an issue, wires could be added to the breakwater to discourage use by loafing birds.

6.2.11 Effects on Fish and Fish Habitat

Fish habitat within the study area is likely to be affected in a number of ways. Short-term effects will occur during construction of the new breakwater and removal of the existing breakwater. Long-term effects will result from the physical presence of the new breakwater and the direct and indirect changes that it causes to fish habitat.

Any effects to fish and fish habitat during site preparation and construction phases would be the result of increased turbidity and sedimentation. Given that clean, inert, quarried stone material will be used for the new breakwater, only a slight increase in turbidity is expected. Also, because of the lack of sediment on the lakebed, stone placement will not cause substrate disturbance. Therefore, turbidity and sedimentation are anticipated to be very minor and localized. Disruption to fish and fish habitat could occur particularly during spawning periods, however because of the extremely low productivity of the fish habitat in the study area, measurable effects on the fish communities the use the area for spawning are not likely.

The primary long-term effect will be a physical change to aquatic habitat resulting from the presence of the new breakwater. The crest of the breakwater and part of the slope are the portions of the structure that would be above the water. This area would no longer be available for use by fish. This constitutes a direct loss of fish habitat. The crest of the breakwater will be approximately 10.5 m over a length of 650 m. The calculation of habitat lost incorporates the 2:1 slopes and the high water mark resulting in a total area lost of 1.51 ha.

In addition to the direct loss of habitat, the new breakwater will also cause changes to the existing habitat in its vicinity. The use of rock and the sloped sides of the new breakwater will result in changes to the existing substrate from primarily bedrock, to boulder/cobble and a change in depth from > 4 m to a variation in depth from 2 to 5 m. The area that will be directly modified beneath the water surface is estimated to be approximately 1.83 ha. This change in depth will create an area of nearshore habitat surrounding the new breakwater. The creation of this area is considered a beneficial effect to fisheries resources, particularly sport fish such as brown trout, smallmouth bass, largemouth bass, perch, pike and crappie because shallower water is generally more productive than deeper water.

The quiet water area to be created on the lakeside of the new breakwater would be characterized as sheltered embayment habitat compared to its present open coast habitat designation. The area of quiet water to be created is estimated to be approximately 10.8 ha or an increase of 80% over existing conditions.

These changes in depth and type of habitat may result in a species shift of the resident fish community. Existing differences between the sheltered embayment and open coast fish communities that the existing breakwater causes have been discussed in Section 4.3.10 of this report. The sheltered embayment will likely result in a higher fish diversity and greater biomass than the harsher open coast habitat outside the breakwater. This difference in species profile and diversity is expected to occur over time.

The Habitat Alteration Assessment Tool (HAAT) for the Great Lakes was used to determine in detail, the amount and type of habitat that will be permanently affected. The areas described above are calculations using this tool that include area of habitat lost, habitat that is directly modified such as a change in substrate and/or depth as well as area of habitat that is modified indirectly such as the change from an open coast to a sheltered embayment. The net result of the HAAT showed that the creation of habitat structure by the breakwater combined with the quiet water conditions that will result from its presence will compensate for the habitat lost. The extent of this result is such that the post-development scenario is almost equal to the pre-development scenario. Fish habitat compensation is still planned as part of this project. The HAAT has been used to determine compensation measures that will achieve a net gain in habitat as a result of the project.

Recommended Mitigation Measures

The primary mitigation measure recommended to minimize the short term effects to fish and fish habitat is the use of clean stone for the breakwater to avoid an unnecessary increase in turbidity. In addition, the sediment control measures discussed earlier will prevent an increase in turbidity from the construction staging activities. In order to meet the aggressive schedule for this project, negotiations are underway with MNR to waive the fisheries timing restrictions for in-water work. This restriction prohibits in-water between April 1 and June 30 in order to protect spawning and young-of-the-year fish. The presence of spawning and young-of-the-year fish species within the study area is unlikely given the low productivity of the study area. Also, the ability to minimize turbidity through the use of clean stone should avoid any impacts to fish communities.

Long-term mitigation and compensation measures that will result in a net gain in fish habitat are preliminary but have been developed in consultation with staff from the Toronto and Region Conservation Authority (TRCA) using the Toronto Waterfront Aquatic Habitat Restoration Strategy. These are presented in **Figures 22 and 23** and are described below.

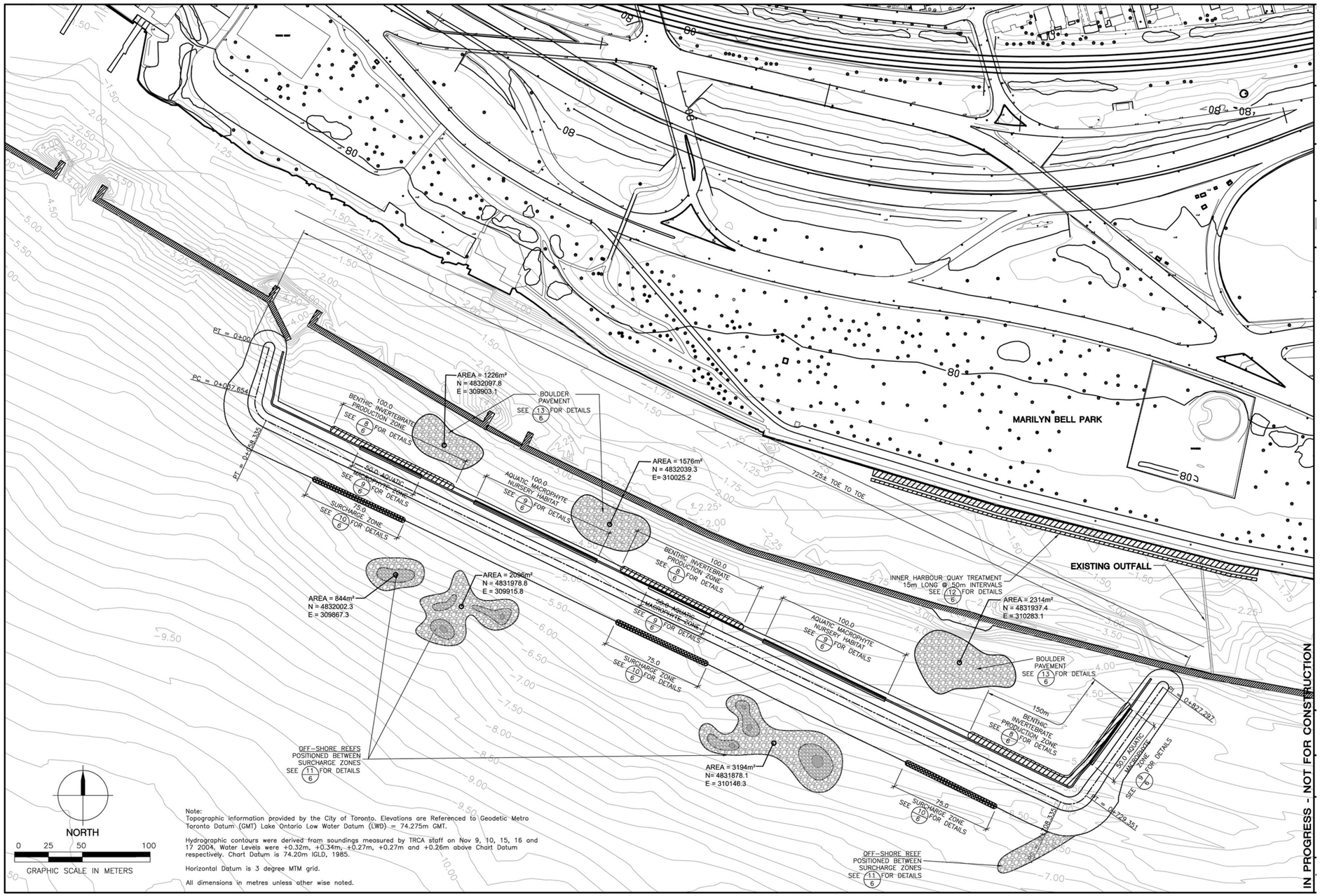
The primary objective in the design of fish habitat compensation structures is to achieve on-site compensation. For this reason several of the proposed measures are to be incorporated within the breakwater itself. Four off-shore reefs have been designed on the lakeside of the breakwater. The purpose of these structures is to provide vertical relief to the bottom topography, create an irregular outline and provide a diversity of substrates. This results in an increase in areas of primary production, an increase in essential habitat for cool and coldwater species and an improvement in forage for other aquatic species. The end result is the creation of more complex habitat and a greater diversity of aquatic species. Rubble will be applied varying in height but to a maximum of 1.5 m. The rubble size will be 300 to 600 mm in diameter. The total area proposed for off-shore reefs is 6,791 m^2.

Surcharge zones are also proposed on the lakeside at the base of the breakwater. These structures perform more or less the same function as the off-shore reefs but are incorporated into the breakwater. These zones will be 1000 mm thick extending 2 m beyond the toe of the breakwater and 2 m up the slope of the breakwater. A similar size of rubble will be used. The total area proposed for surcharge zones is 890 m^2. Compensation works of this type could be installed during breakwater construction.

Compensation measures are also proposed for the shoreside of the breakwater. These include benthic invertebrate production zones and aquatic macrophyte nursery habitat areas. The benthic invertebrate production zones create small interstitial spaces, free from fines. A veneer of small material will consist of alternating pockets of rock shatter (20 to 200 mm) and river-run gravel (5 to 70 mm). The placement will occur from the 1 m bench of the breakwater to the lakebed. This top dressing of smaller material will create approximately 1,922 m^2 of smaller interstitial spaces suitable for benthic invertebrate production.

The aquatic macrophyte nursery habitat area will consist of 3 m wide synthetic geogrid planters keyed back under the armourstone along the 1 m bench of the breakwater. These will be planted with submergent and emergent vegetation to provide sheltered, vegetated nursery areas along the length of the breakwater. The total area of this measure will be 350 m^2.

Another technique proposed for the shore side habitat involves the creation/re-establishment of boulder habitat/cover through both the addition of appropriate sized rock in areas beyond the toe of slope of the breakwater. Three areas will be enhanced by adding large riverstone (250 mm to 600 mm diameter) just beyond the toe of the new slope in the locations specified on **Figure 22**. This rock will add habitat diversity beyond the toe of slope in sections to afford shelter and improve predator/prey interactions. Total area of additional rock will be 5,116 m^2.



Note:
Topographic information provided by the City of Toronto. Elevations are Referenced to Geodetic Metro Toronto Datum (GMT) Lake Ontario Low Water Datum (LWD) = 74.275m GMT.

Hydrographic contours were derived from soundings measured by TRCA staff on Nov 9, 10, 15, 16 and 17 2004, Water Levels were +0.32m, +0.34m, +0.27m, +0.27m and +0.26m above Chart Datum respectively. Chart Datum is 74.20m IGLD, 1985.

Horizontal Datum is 3 degree MTM grid.

All dimensions in metres unless other wise noted.

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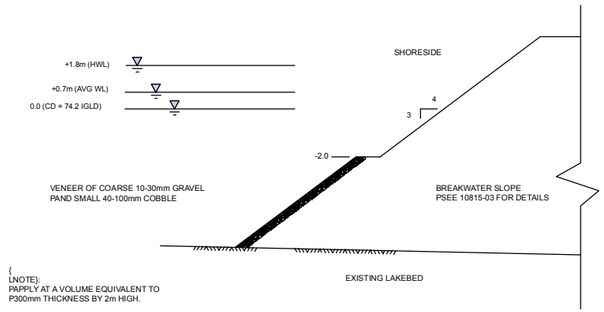
Proposed Fish Habitat Compensation Plan View

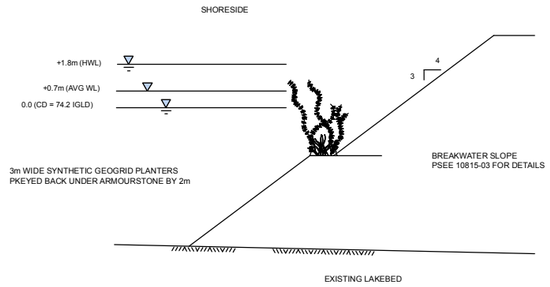
Western Beaches Watercourse EA

Figure 22

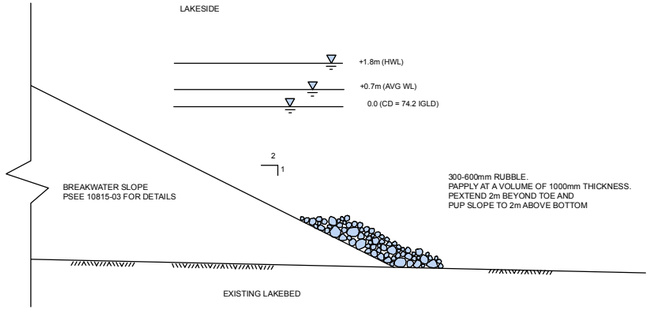
Project 50170, May 2005



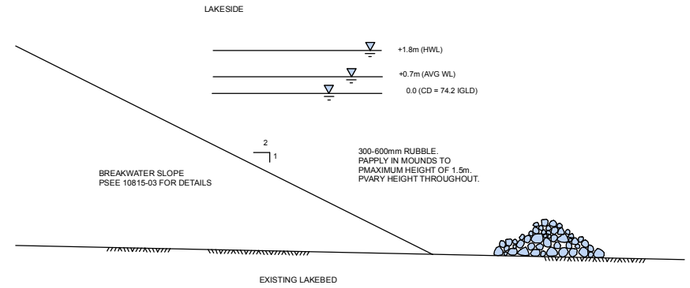
8/6 BENTHIC INVERTEBRATE PRODUCTION ZONE



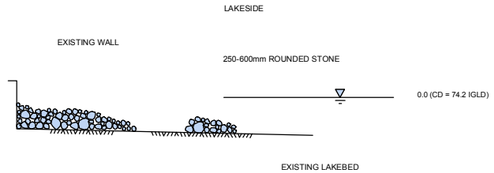
9/6 AQUATIC MACROPHYTE NURSERY HABITAT



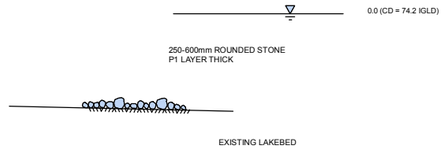
10/6 SURCHARGE ZONE



11/6 OFFSHORE REEFS



12/6 INNER HARBOUR QUAY TREATMENT



13/6 BOULDER PAVEMENT

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Proposed Fish Habitat Compensation Cross Sections

Western Beaches Watercourse EA

Project 50170, May 2005

Figure 23

Map Document: (N:\Projects\2005\50170\2005\Final\GISSpatial\50170_proposed_fish_habitat_comp_fig22.mxd) 19/05/2005 -- 1:35:37 PM

Improvements along the Lake Ontario shoreline include the addition of structural elements such as boulder and cobble to improve habitat structure. The use of riverstone 250 mm to 600 mm in diameter is proposed. This will be placed against the vertical shoreline out to a distance of 5 m. Additional riverstone will be placed farther out to provide additional structure. This rock will improve forage for both terrestrial and aquatic species and will add structural elements to the shoreline. The total area of this treatment is 2,055 m^2. This type of compensation is proposed beyond the limits of the watercourse facility so as not to compromise the racing course (**Figure 22**).

The habitat compensation plan is in its preliminary stages, but details will be submitted to Fisheries and Oceans Canada as part of the application for authorization under the *Fisheries Act*. The total area of the proposed compensation measures is 17,124 m^2.

If additional habitat compensation is required to achieve a net gain in habitat, Ontario Place has also been identified as a potential area for habitat compensation. For example, the west edge is amenable to the creation of wetland habitat, which would include planting submergent and emergent vegetation, creating lagoons and adding structural elements to increase habitat function and diversity. Shoreline shoals, underwater reefs and vegetated areas could also be created in some of the sheltered embayment areas of Ontario Place.

6.2.12 Effects on Air Quality and Climate Change

As shown in **Table 12**, each of the project works and activities has the potential to affect air quality largely due to the operation of heavy machinery (i.e., hydraulic concrete breakers, cranes), barges and/or other vessels. These physical works and activities are likely to result in decreased ambient air quality (i.e., from increased emissions and concentrations of airborne chemical pollutants, dust, smoke and other particulate matter). Increased odours from lake sediments and soils are not anticipated as the potential for exposure of these materials to the air is minimal. There is no dredging or major excavations required. The operation of heavy machinery will result in increased greenhouse gas emissions to the atmosphere that contribute to climate change. While greenhouse gas emissions will occur and are inevitable during the construction phase, the effect on local air quality will likely be minimal and masked by the magnitude of emissions from vehicles using the Gardiner Expressway and Lakeshore Boulevard. As such, any change is not likely to be measureable over baseline conditions. Effects of climate change on the project are addressed in Section 6.4.

Recommended Mitigation Measures

The following mitigation measures are recommended to address the likely adverse effects of the Western Beaches Watercourse Facility project on air quality. The following mitigation measures represent good environmental practices that will be implemented:

a) avoid operating and idling vehicles and gas-powered equipment during smog advisories;

b) regular vessel and equipment maintenance and the use of vessels and equipment within operating specifications;

c) avoid ground disturbing site preparation or construction activities during very windy days in the dry season;

d) stabilize soil and other material storage piles against wind erosion. Stabilize high traffic areas with clean gravel surface layer or other suitable cover material. Restore disturbed areas as soon as possible to minimize duration of soil exposure;

e) minimize vehicle traffic on exposed soils;

f) spray water to minimize dust off paved areas or exposed soils. Use dust suppressants only on large problem areas.

g) transport fill material by covered vehicles;

h) advertise the City of Toronto's complaint reporting telephone number and establish a complaint monitoring, reporting and response program.

6.2.13 Effects of Noise and Vibration

As shown in **Table 12**, each of the project works and activities has the potential to affect noise and vibration, largely due to the operation of heavy machinery (i.e., hydraulic concrete breakers, cranes), barges and/or other vessels. These physical works and activities are likely to result in increased ambient noise levels and changed acoustic quality. The removal of the existing breakwater using hydraulic concrete breakers and the placement of quarry stone off barges will be noisy events that may startle some people using the shoreline and nearshore areas adjacent to the project site. These people will likely be recreational users of the Martin Goodman Trail, boaters on Lake Ontario, users of other recreational features in the vicinity of Marilyn Bell Park, and pedestrians along local roads. As such, they are transient receptors and would only be affected for short periods of time. The noise generated by the project will likely be masked by noise generated by the use of the Gardiner Expressway and Lakeshore Boulevard. Moreover, adverse noise effects are not anticipated at permanent residence, at the Ontario Place marina, or the nearest hospital. These features are located over 500 m away from the project site and project generated noise will be attenuated by distance and intervening buildings and structures.

Recommended Mitigation Measures

The following mitigation measures are recommended to address the likely adverse effects of the Western Beaches Watercourse project on noise and vibration. The following mitigation measures represent good environmental practices that should be implemented:

a) regular vessel and equipment maintenance and the use of vessels and equipment within operating specifications;

b) use new or well maintained heavy equipment and machinery, preferably fitted with muffler/exhaust system baffles, engine covers;

c) minimize vessel movement in areas near the shoreline of Ontario Place and avoid vessel movement near the Argonaut Rowing Club (i.e. nearest recreational club facility);

d) minimize noise generating activities; and

e) advertise the City of Toronto's complaint reporting telephone number and establish a complaint monitoring, reporting and response program.

6.2.14 Residual Effects on the Biological Environment

Taking into account the identified mitigation measures, the following are the residual adverse effects of the Western Beaches Watercourse project on the Biological Environment:

a) disruption to existing lawns, trees and shrubs in Marilyn Bell Park;

b) decreased ambient air quality (i.e., from increased emissions and concentrations of airborne chemical pollutants, dust, smoke and other particulate matter);

c) increased ambient noise levels and changed acoustic quality; and

d) creation of additional habitat for undesirable nesting shore birds.

The Western Beaches Watercourse project will result in the following beneficial effects on the Biological Environment:

a) improved water quality in the nearshore area due to the increase in the volume of water and greater average depth;

b) creation of more complex fish habitat including an increase in sheltered embayment area as a result of the breakwater;

c) an overall net gain in fish habitat as a result of the fish habitat compensation plan; and

d) greater fish diversity and biomass due to the sheltered embayment area.

6.2.15 Effects on the Local Economy

No adverse effects of the project on local economic activity are anticipated. There are no businesses that are not sensitive to the project effects (i.e., business with outdoor components) in the vicinity of the project site, and adverse effects are anticipated on major tourist facilities such as Exhibition Place or Ontario Place. The construction of the new breakwater will generate both construction jobs and indirect and induced employment through the purchasing of goods and services. The sectors that are most likely to benefit from the project are construction trades, transportation and suppliers of aggregates. Nevertheless, the project is not anticipated to be a major economic stimulus. The beneficial effects of the project on tourism is discussed below.

Recommended Mitigation Measures

No mitigation measures are recommended as no adverse effects on the local economy.

6.2.16 Effects on Tourism and Recreation

During its construction, the project is likely to result in the temporary disruption to on-shore recreational and community activities undertaken in Marilyn Bell Park along the Martin Goodman Trail and due to temporary access restrictions, particularly access to the parking lot at Marilyn Bell Park. These activities include informal activities conducted by residents and visitors, as well as signature events along waterfront (i.e., Symphony of Fire, Caribana). Increased noise and dust levels associated with all project works and activities are likely to disrupt these social and recreational uses of the waterfront particularly in areas nearest Marilyn Bell Park and the breakwater site itself. During the peak summer season, numerous water sports and events are undertaken in the nearshore area (e.g. regattas and other races). Onshore, a wide range of activities might be disrupted (e.g. walking, biking, jogging, rollerblading, organized walkathons, marathons and cycling tours). However, construction is anticipated to commence at the end of the summer of 2005. Work along the leeside of the breakwater is scheduled to be complete by June 2006. Work along the outer side of the breakwater may continue through the summer of 2006 and will affect a limited area lakeward of the breakwater. Therefore, adverse effects will tend to occur during the non-peak season. Disruption to tourism and recreational events and activities undertaken at Exhibition Place / National Trade Centre and Ontario Place are not anticipated due to the distance of the project site from these important local features.

The presence and use of the watercourse facility will generate indirect effects on tourism and recreational activities. These indirect effects would occur during race events, and may include the building of temporary structures in Marilyn Bell Park (e.g., grandstands, washrooms, judging tower, etc.); adverse effects on traffic in the immediate area (e.g. traffic congestion from both possible road closures and vehicular volume associated with the event); and adverse effects on pedestrian walkways (e.g., the Martin Goodman Trail may have to be temporarily re-routed or closed during events). Similarly, other existing tourist and recreational activities in the area may experience effects during race events (e.g., waterfront clubs and organizations).

Over the long-term, the proposed watercourse will serve to strengthen the Western Beaches area as a destination for residents and tourists alike. A new multi-sport watercourse will likely serve the needs of those involved in dragon boat racing, rowing, flat water canoeing, kayaking and other water sport activities. The anticipated reduction in wave reflection due to sloped sides of breakwater will make watersports, that rely on calm conditions, safer and more enjoyable. To this end, the project will enhance the tourism potential of the Western Beaches area and become a legacy to the City and its revitalized waterfront.

Recommended Mitigation Measures

The following measures are recommended to mitigate the adverse effects on tourism and recreation conditions:

a) co-ordinate timing of construction activities with organizers of major tourism events on the western beaches;

b) minimize the need for fencing and other access controls in Marilyn Bell Park where possible;

c) provide a safe detour that trail users could use when events block the main trail;

d) relocate the Martin Goodman Trail portion of Marilyn Bell Park (if required) during construction;

e) restore and/or revegetate the construction site and repair any damage to the Martin Goodman trail or park facilities in a timely manner. Where possible, incorporate improvements to the Martin Goodman trail that will allow cyclists, pedestrians and inline skaters to use the area safely and enjoyably;

f) the City of Toronto shall continue to work with relevant stakeholders to a comprehensive course management system that maximizes access to the facility for all users; and

g) the TRCA shall establish a construction liaison committee to identify and resolve problems regarding tourist and recreational activities during the site preparation and construction phase. The intent of the construction liaison committee is to pick up the public interface after the EA process and carry through construction and commissioning of the project. The forum will provide the project the ability to transmit information to the community and stakeholders groups and for the community and stakeholders to keep the project informed of their interests, events and requirements. The focus will be on coordinating the shared spaces along the waterfront, construction areas and transportation lanes and will look ahead two months in the schedule to minimize and mitigate any potential conflicts. The frequency of these meetings will be once per month starting in late June/early July.

6.2.17 Effects on Visual Setting

During site preparation and construction, the project site may be viewed as a visual nuisance. The project site, its laydown areas, temporary facilities and equipment will be visible and not compatible with the surrounding parkland and recreational land uses. Visibility will likely be greatest from viewing locations at Marilyn Bell Park, Ontario Place, Exhibition Place, the Argonaut Rowing Club, the Toronto Sailing and Canoe Club and the Boulevard Club and along the Martin Goodman Trail. To a lesser extent, the project site will be visible from the southern portion of the Parkdale neighbourhood, from the Gardiner Expressway and Lakeshore Boulevard, and from bridges crossing these transportation routes.

The new breakwater will become part of the vista of Lake Ontario from many viewing locations in the Western Beaches area. Views along the Lake Ontario shoreline of the new breakwater will not extend beyond those of the existing breakwater (i.e. approximately 1 km to the east; and over 4 km to the west past Sunny Side Park, and 1 km to the north). The most prominent views of the new breakwater will continue to be from the western portion of Ontario Place and its bridges connecting it to CNE grounds and from the Argonaut Rowing Club house, from Marilyn Bell Park, Lakeshore Blvd. and bridges over the Gardiner Expressway at Jamieson Avenue and Dunn Ave. From the south, the new breakwater will continue to be a visible feature well into Lake Ontario, but will be more prominent in the nearshore area than the existing breakwater.

Because the new breakwater will be approximately 1.2 m higher than the existing breakwater, it will decrease the view to the lake from the shore. This change or loss in view will be offset by the increased distance offshore of the proposed breakwater (approximately 55 m) which will decrease the effect on the line of sight. As such, the new breakwater will be a more visible feature in the foreground than the existing breakwater, but will becomes more difficult to distinguish from the background with distance. The new breakwater will be different than the existing one, but is considered to be compatible with the existing character of the area. Given the poor state of repair of the existing breakwater, the new facility will likely be more pleasing to viewers. Its use of natural stone rather than concrete will also enhance the aesthetics of the area.

Recommended Mitigation Measures

The following measures are recommended to mitigate the adverse effects on the visual setting:

a) minimize the need for fencing and hoarding that block views of the project site and Lake Ontario;

b) maintain a clean construction site through regular litter pick-up and proper storage of equipment and materials;

In addition to the mitigation measures identified above, the TWRC will examine the feasibility, advantages and disadvantages of incorporating vegetation into the breakwater design during its detailed design, taking into consideration the budget constraints associated with this project. It is noteworthy, that the incorporation of vegetation into the design would serve to enhance the habitat value of the new breakwater, but may not be considered an enhancement to the visual setting.

6.2.18 Effects on Land Use

The proposed new breakwater and watercourse is in keeping with the Central Waterfront planning area. No adverse effects are anticipated to residential, commercial, industrial or institutional land uses along the waterfront or in the Parkdale and Swansea neighbourhoods. No permanent land-based structures (i.e., buildings) are proposed as part of the watercourse development; therefore, there are no permanent land use effects. The Western Beaches Watercourse is not likely to adversely affect the character of the Western Beaches area of the City of Toronto, nor the fundamental socio-economic or physical dimensions of area, particularly those aspects of the Parkdale neighbourhood that are valued by its residents. The project will not significantly affect any household, nor is it not likely to cause widespread or large-scale changes in population, economic activity, municipal infrastructure, community services or resources.

The project is considered to be compatible with the existing recreational land uses along the waterfront and the existing use of the nearshore area of Lake Ontario by recreational boaters and other users of the waterfront. It will enhance the waterfront area and encourage greater use of existing waterfront facilities (e.g., Marilyn Bell Park).

The project is also compatible with the City of Toronto's Official Plan (2002) objectives for *Parks and Open Space Areas* in that, the project will be undertaken in a manner that:

a) protects, enhances and restore trees, vegetation and other natural heritage features;
b) preserves access;
c) maintains linkages between parks and open spaces;
d) maintains and improves the usability of publicly owned *Parks and Open Space Areas* or public parks, recreational and cultural purposes;
e) respects the physical form, design, character and function of *Parks and Open Space Areas*; and
f) maintains comfortable and safe pedestrian conditions.

Recommended Mitigation Measures

No mitigation measures are recommended as no adverse effects on land use are anticipated.

6.2.19 Effects on Human Health

During normal operating conditions, effects on human health are not anticipated. Sound levels and emissions from vehicles and heavy equipment are not expected to be at levels that could result in measureable effects to human health. Standard occupational health and safety practices will be implemented for all workers.

Concern has been expressed over the potential bacterial (*E. coli*) effects on human activities and wildlife habitats at the proposed location of the Western Beaches watercourse. The primary sources of contaminants include overflows from the Jameson Avenue outfall and nearby outfalls such as Cowan Avenue outfall, near shore plume from the Humber River runoff and the existence of waterfowl, notably geese and seagulls. Although these outfalls extend beyond the existing breakwater, the contaminants can migrate back towards the shore through gaps that exist in the breakwater to promote water circulation. However, it is not anticipated that the amount of contaminants presently migrating back into the shallower waters would increase with the new breakwater. This is because the new breakwater will not change the location of the gaps that allow for the movement of vessels near Ontario Place and because the existing breakwater is founded on wooden cribs, which currently allows for the exchange of water on either side of the breakwater. The new breakwater will be higher and wider, thus minimizing the frequency of waves overtopping the facility.

Recommended Mitigation Measures

No mitigation measures are recommended as no measurable adverse effects on human health are anticipated.

6.2.20 Effects on Transportation and Navigation

During construction, Marilyn Bell Park will be accessed by trucks and other vehicles bringing construction equipment and supplies to the project site. If all the rock is brought to the site by truck, it is estimated that fewer than 50 vehicles per day will enter / exit the construction staying area. Given the high traffic volumes on Lakeshore Boulevard, Levels of Service (LOS) on Lakeshore Boulevard are not anticipated to be affected. Nevertheless, it is anticipated that the majority of the rock will be brought in by barge, reducing the adverse effects on traffic.

Over the long-term, the facilities are in-place to handle the movement of spectators in and out of the area. Adequate transit options, adequate parking facilities, GO Train Service and event shuttle service would meet the needs of events using the watercourse.

Although not required for the purposes of this project, it is suggested that the following be considered by the City of Toronto to better manage traffic related to events at the watercourse facility:

a) relocate the roadway in Marilyn Bell Park to bring the park closer to the waterfront and allow for better utilization for waterfront events;

b) construct a new park entrance to better identify the location;

c) identify and construct an additional pedestrian crossing in the immediate vicinity of the park;

d) utilize a shuttle service to service Exhibition Place and possible satellite parking locations;

e) utilize the Go Transit Platform during events;

f) arrange a media campaign to educate special event guests to utilize transit and alternate modes ways of attending the event; and

g) coordinate any upgrades with Exhibition Place.

There will be disruption to navigation, recreational boating and other water sport uses in the immediate vicinity of the proposed breakwater during construction. Safe distances must be maintained from the construction equipment and passage of material and equipment barges. During construction, caution buoys will be placed around the perimeter of the construction site to warn boat traffic of construction. A Notice to Mariners will be posted to advise of Work in Progress. Construction is anticipated to commence at the end of the summer of 2005. Work along the leeside of the breakwater is scheduled to be complete by June 2006. Therefore the area most used by the various water sports will be most affected during the non-peak season. Work along the outer side of the breakwater will continue through the summer of 2006 and will affect a limited area lakeward of the breakwater. These effects are short-lived.

As noted above, current waves often overtop the existing breakwater and wave action is transmitted through gaps and damaged portions of the existing structure. This results in wave agitation on the leeside of the existing breakwater and presents a safety hazard to rowers, canoeists and other flatwater sport enthusiasts. The proposed breakwater will be higher and more effective in reducing the amount of wave overtopping and wave transmission. Following completion, the breakwater will provide an increased area of quiet water during periods of stormy weather immediately on the leeside of the breakwater for the length of the breakwater. This increased area will serve to improve safety conditions.

The project is to increase the facilities available for water sports and will have an ongoing benefit. The existing entrance to Ontario Place marina will be maintained as will access to the Toronto Sail and Canoe Club. Navigational markers and lights will be implemented in accordance with the requirements and instructions of the Canadian Coast Guard and the Toronto Port Authority. As such no adverse effects on commercial or recreational boating are anticipated.

Recommended Mitigation Measures

The following measures are recommended to mitigate the adverse effects on transportation and navigation:

a) use trained flagmen to facilitate the safe movement of vehicles off Lakeshore Boulevard into Marilyn Bell Park during construction;

b) ensure appropriate signage is posted regarding navigation at the site;

c) during the construction phase, signage warning boaters of the construction site. Navigational lighting or markings may be required to mark the safe navigational channel;

d) flashing yellow warning lights may be required to mark any scaffolding, debris, equipment or other thing that obstructs navigation;

e) small boat traffic traveling on the lake must be allowed passage through the construction site and be assisted as necessary;

f) no cables or other temporary structure may completely span the waterway nor prevent small boat traffic unless pre-authorized by Transport Canada;

g) the portion of the existing breakwater structure that is to be removed must be removed to an elevation of the existing bed of the waterway;

h) the City of Toronto shall continue to work with relevant stakeholders to a comprehensive course management system that maximizes safety for all users of the watercourse facility; and

i) the TRCA shall establish a construction liaison committee to identify and resolve problems regarding navigation during the site preparation and construction phase.

6.2.21 Residual Effects on the Socio-economic Environment

Taking into account the identified mitigation measures, the following are the residual adverse effects of the Western Beaches Watercourse Facility project on the Socio-economic Environment

a) disruption to on-shore recreational activities;
b) reduced lake vista; and
c) disruption to navigation, recreational boating and other water sport uses;

The following beneficial effects on the Socio-economic Environment are anticipated:

a) the project will serve to generate construction jobs and business activity related to the purchasing of goods and services;

b) the proposed watercourse facility will serve to strengthen the Western Beaches area as a destination for residents and tourists alike;

c) a new multi-sport watercourse facility will likely serve the needs of those involved in dragon boat racing, rowing, flat water canoeing, kayaking and other water sport activities;

d) the project will enhance the tourism potential of the Western Beaches area and become a legacy to the City and its revitalized waterfront;

e) given the poor state of repair of the existing breakwater, the new facility will likely be more pleasing to viewers. Its use of natural stone rather than concrete will also enhance the aesthetics of the area; and

f) following completion, the breakwater will provide an increased area of quiet water during periods of stormy weather immediately on the leeside of the breakwater for the length of the breakwater. This increased area will serve to improve safety conditions.

6.2.22 Effects on Heritage and Archaeology

Stage 1 archaeological assessments were completed for both land-side and maritime components of the study area and a Stage 2 assessment was also completed for the maritime component. Marilyn Bell Park is comprised entirely of fill, therefore no potential exists for buried heritage or archaeological resources.

The areas surrounding the existing breakwater and the new breakwater are heavily disturbed but are located close to areas with high potential for heritage and archaeological resources. A remotely operated vehicle (ROV) was used to complete a Stage 2 archaeological assessment in the area of the new and existing breakwaters. No heritage or archaeological artifacts were identified during this assessment.

Recommended Mitigation Measures

Based on the knowledge that Marilyn Bell Park is comprised of fill and the results of the Stage 2 underwater archaeological assessment, no adverse effects are anticipated and no mitigation measures are recommended.

6.2.23 Effects on Aboriginal Interests

Aboriginal people have lived from the land and its resources for centuries. In their role as stewards of the environment, Aboriginal people and their culture take a very long perspective on how human actions today will affect the environment for the next seven generations of people. For this reason, it is acknowledged that First Nations and Aboriginal peoples are an important stakeholder in the environmental assessment process. Given the level of urbanization within the study area and its existing use for recreation, it is not likely that Aboriginal people use the area for traditional or cultural pursuits. However, Aboriginal people will have an interest in the potential for the project to result in a loss or disruption of heritage resources, disruption of wildlife and effects to vegetation. These effects have been assessed in previous sections of this environmental assessment.

Recommended Mitigation Measures

No mitigation measures are recommended as no adverse effects on Aboriginal Interests are anticipated.

6.2.24 Residual Effects on the Cultural Environment

Taking into account the identified mitigation measures, no residual adverse effects of Western Beaches Watercourse project on the Cultural Environment are anticipated.

6.3 Effects on Sustainability and Resource Use

This Section of the report presents the assessment of the likely effects of the Western Beaches Watercourse project on the sustainability of resources, both renewable and non-renewable. The goal of the assessment was to determine if such resources were likely to be affected by the project to the point that they were no longer sustainable. For this purpose, the principle of *"sustainability"* is consistent with the United Nations' definition of sustainable development, i.e., *"economic development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*. Because the project includes site preparation and construction phases and an operational phase likely extending throughout several years into the future, the assessment considers both the resource-related issues of construction and development of the project; and the presence of the breakwater throughout its operations phases.

6.3.1 The TWRC's Sustainability Framework

The Toronto Waterfront Revitalization Corporation (TWRC) has a commitment to sustainability principles that will be achieved through projects such as the Western Beaches Watercourse. The Western Beaches Watercourse project will provide the environmental enhancement, economic gain and social

benefits that are an integral part of the TWRC's mission. The Western Beaches Watercourse project is an excellent example of a 'sustainability outcome' and has the potential to fulfill the five broad, distinctive goals that are set out in the framework (Sustainability Framework Draft, September 2004):

1. Sharing the benefits: Net Plus
2. Global hub of creativity and innovation
3. The urban cottage
4. Feels like home
5. Strength through Diversity

Some of the corresponding Western Beaches Watercourse project objectives to the goals listed above include enhanced aquatic habitat, attractive waterfront communities, local economic development and celebration of the waterfront as a feature. These are only a few of the ways that this project could contribute to the TWRC's mission and contribute to the Toronto waterfront emerging as a "global hub of creativity and innovation."

6.3.2 Meeting the TWRC's Sustainability Framework Objectives

In general, the elements of the Western Beaches Watercourse have been considered in each instance as amenities that work as comprehensive improvements to the Toronto Waterfront well beyond their immediate function as a new infrastructure for an international Dragon Boat racing venue.

The transformation of Marilyn Bell Park, the extension of the waterfront promenade beyond Ontario Place to connect to the Western Beaches, and the re-use of existing parking facilities at the Exhibition Place and Ontario Place, that will bring advantages to the waterfront year-round all contribute to a strong demonstration of the TWRC Sustainability Framework. The creation of the Western Beaches Watercourse will further some of the objectives outlined in the goals of the Sustainability Framework, Action Plan by addressing the following described below.

6.3.2.1 Land Use

Good land use planning is a fundamental influence in creating sustainable communities with a high quality of life and links to most of the themes outlined in the TWRC Sustainability Framework.

Recapture the Value of Abandoned and Underused Sites

Marilyn Bell Park is currently an underused open space cut off from the neighbourhoods to the north. The construction of the new watercourse can bring a transformation to Marilyn Bell Park, including a looping and improved Martin Goodman Trail, a continuation of the public waterfront promenade by relocating the

service road, and new landscaping and tree planting to rejuvenate the park surface. The international Dragon Boat event and the potential for other major watercourse-related events could spur important improvements like better public transit connections and strengthened ties to Ontario Place and Exhibition Place.

This component of the Western Beaches Watercourse will bring vitality and diversity of opportunity to the Toronto waterfront.

6.3.2.2 Transportation

Transportation is one of the top issues facing residents and businesses in the Greater Toronto Area. Numerous transportation-related issues need to be addressed to support healthy communities, sustainable development, and the natural environment. The TWRC Sustainability Framework calls for sustainable communities that maximize the use of alternative transportation options for moving people and goods.

Minimize Car Use

By locating the watercourse at Marilyn Bell Park, existing parking facilities at Exhibition Place and Ontario Place can be used for a majority of parking accommodation, with minimal areas set aside for servicing. Because of this capacity, additional parking facilities will not be constructed as part of this project. The provision of public transit connections to Marilyn Bell Park and strengthened pedestrian connections from Ontario Place and Exhibition Place will further reduce the dependence on cars.

Increase Walking, Cycling and Transit Use

The improvements proposed for Martin Goodman Trail in both its looping structure, and the new waterfront promenade will provide an extension and elaboration of the current waterfront amenities, bringing potential new connections to the Western Beaches. Public transit access, potentially made available for servicing the watercourse and Marilyn Bell Park, will reduce car dependence for reaching this zone of the waterfront.

These components of the Western Beaches Watercourse will minimize car use, provide for walking and cycling opportunities, contribute to significant health benefits, decrease contributions to global warming and contribute to community vibrancy through increased opportunities for interaction.

6.3.2.3 Human Community

Waterfronts attract people and contribute to economic development, tourism, community pride, and neighbourhood vibrancy. Waterfronts as valuable ecosystems contribute to long-term sustainability and quality of life at local, regional and national levels. More people are realizing that waterfronts can be a catalyst to bring new life and energy to their entire community.

Ensuring a high urban design quality will reflect the area's outstanding coastal setting and the importance of the waterfront area to the appearance and appeal of the City.

Waterfront Communities that Attract People Year Round

The new watercourse will bring a transformation of Marilyn Bell Park through the making of an adaptable infrastructure of landscape features. These features are set up to organize temporary tents for both modest and major events, but will also provide flexibility as sites for other kinds of recreational uses year-round. The looping of the Martin Goodman Trail will provide a localized 'track' around the perimeter of the park extending the vitality of the Toronto waterfront well beyond the western limit of Ontario Place.

This component of the Western Beaches Watercourse will improve and maintain an attractive, environmentally sound park as well as provide recreational opportunities where people from all backgrounds and ages can play, visit and learn.

6.3.2.4 Cultural Resources

The TWRC Sustainability Framework supports the development of the downtown Toronto waterfront areas as vibrant and attractive destinations for residents and tourists, with a mix of uses and activities that are people-oriented, of high quality design, and easily accessible from other areas of the City.

Bring Attention to the Toronto Waterfront's Sustainability Achievements and Potential

The watercourse facility will draw major events long after the International Dragon Boat Federation's race has been successfully hosted. The opportunity to expand the watercourse will serve to attract more international events to this location. The excellence of the new watercourse will attract positive attention to the Toronto waterfront.

A strong commitment to cultural vibrancy goes hand-in-hand with support of cultural heritage. Archaeological sites, historic buildings and structures, landscapes, and objects are the fabric of our human heritage. Collectively known as cultural resources they are our tangible links with the past. This project will not affect these resources. The project supports, and takes responsibility for the protection of these irreplaceable resources in a spirit of stewardship for future generations to understand and enjoy.

The Western Beaches Watercourse will allow for the development of an engaging waterfront that accounts for an attractive and stimulating place to visit and that enables all people to fully participate in the City life.

6.3.2.5 Natural Heritage

Attractive and ecologically rich environments, where the natural heritage is valued and cherished, are essential to social and economic well-being. A key role of the planning system is to ensure that society's land requirements in terms of housing, economic activity; transport infrastructure and recreation are met in ways, which do not erode environmental capital. Conservation and development can often be fully compatible and, with careful planning, the potential for conflict can be minimized.

Extensive Habitat Improvement

The watercourse facility will both provide funding to re-establish areas of aquatic habitat, and establish new areas of aquatic habitat as future provisions in the new breakwater. This projects supports extensive aquatic habitat improvement. The potential for vegetating the breakwater for aesthetic purposes and improve the natural heritage component of the breakwater is also being considered. Through these measures, the Western Beaches Watercourse will enhance the environmental integrity of the Toronto waterfront.

6.3.2.6 Water

Lake Ontario is a transportation corridor and a fresh water source, important to the Toronto Region.

Contribute to Improved Water Quality in the Lake

The construction of the new breakwater is further out in Lake Ontario than the existing one. This location should enhance the internal circulation of water in the nearshore area resulting in improved water quality due to the increase in the volume of water and greater average depth.

Celebrate the Waterfront Setting and Water as a Feature

The true focus of the watercourse facility will be the water itself and the diversity of water sports that it will promote. The creation of a facility that meets dragon boat and rowing international standards can become a magnet for events and training across North America, and become an important contribution to any future Toronto bids for international events. The promotion of the active rowing communities in Toronto comes at a time where dragon boat racing has become one of the fastest growing sports internationally.

This component of the Western Beaches Watercourse recognizes the significance of the public realm in transforming the Toronto's waterfront into a destination for international tourism, national celebration and local enjoyment.

6.3.2.7 Innovation

The quality of design of new and existing waterfront areas and neighbourhoods, both in the private and public realm, influence the quality of life and the sustainability of neighbourhoods over time. One of the goals of the sustainability framework is to make the Toronto waterfront an example of sustainability as well as a centre for creativity and knowledge.

Stimulate Creativity and Innovation

The breakwater construction and its future accommodation of fishing, boardwalk, aquatic habitat, landscaping and lighting will promote new innovative design for major water infrastructure. The use of the watercourse for a training venue will stimulate the growing interest in rowing, dragon boat racing and other water sports.

This component of the Western Beaches Watercourse will provide for a rich and diverse cultural environment by offering a design developed from multi-disciplinary, community participation.

6.3.2.8 Other TWRC's Sustainability Framework Objectives

In addition to the goals outlined in the TWRC's Sustainability Framework and the Western Beaches Watercourse project objectives fulfilling these goals, as discussed above, there are other goals that this project addresses indirectly:

Air Quality

Air quality is directly linked to energy use along with land use and infrastructure planning. By addressing these sustainability components the Western Beaches Watercourse project strives towards minimizing pollutant emissions on the Toronto waterfront by promoting sustainable transportation choices.

Materials and Waste

The development of the watercourse facility acknowledges the need for local economic development by buying the project materials from local suppliers. There will be a minimal or no use or production of hazardous waste during the revitalization activities. In addition, waste material generated from removal of the existing breakwater will be recycled as core material along the new breakwater.

6.3.3 Non-Renewable Resources

Non-renewable resources relevant to the project, and generally considered to occur within the scope of this EA include the availability of aggregate mineral resources because of demand for a variety of materials for the construction of the breakwater and ancillary facilities. It is estimated that the breakwater will require approximately 170,000 tonnes of quarry run core and 120,000 tonnes of armour stone.

Mineral aggregates include bedrock-derived quarry stone, crushed stone as well as naturally formed sand and gravel. Aggregates constitute a major raw material in Ontario's road building and construction industries. In 2002, licensed pit and quarry operators' production was approximately 141 Million tonnes of aggregate materials including 2.1 million tonnes of "other stone" which includes industrial stone and dimensional stone (Ontario Aggregate Resources Corporation, 2002).

Aggregate deposits are fixed-location, non-renewable resources which can be exploited only in those areas where they occur. Throughout southern Ontario, mineral aggregate deposits are plentiful, but often the potential for extractive development is greatest in areas where land use competition is extreme. This project represents approximately 13.5% of the 2002 licenced production of "other stone".

6.3.4 Renewable Resources

Renewable resources relevant to the project, and generally considered to occur within the scope of this EA are the fisheries resources. Recreational sport fishing is the primary fisheries resource within the Toronto waterfront area. The presence of sport fish such as smallmouth bass, largemouth bass, perch, pike and black crappie support the use of the waterfront for fishing purposes. The sustainability of sport fishing is dependant on the maintenance of fish habitat such that the existing fish community is able to reproduce successfully and provide sufficient recruitment in any given year class. These species are found in habitat that is represented in the area within the existing breakwater. The existing breakwater is located 80 m offshore. The new breakwater will be located approximately 135 m offshore and habitat could be expected to increase proportionately. The presence of the new breakwater will alter conditions such that habitat for these species will increase.

6.4 Effects of the Environment on the Project

Under *the Canadian Environmental Assessment Act*, an environmental assessment must consider the potential effects the environment may have on the project as part of the evaluation of effects. Generally, the potential effects of the environment on the Western Beaches Watercourse project include weather-related events; physical forces exerted by water flows and currents or ice conditions and subsidence of the lake bottom. These are considered to be events that currently occur or have the potential to increase in

their frequency or intensity due to climate change. As noted previously, there are no reliable estimates of the impact of climate change on geographic areas as small as the Western Beaches, however climate change studies have led to some preliminary conclusions regarding the effect of greenhouse gas-induced climatic change for the Southern Ontario-Great Lakes Basin region over the next several decades. These include:

a) temperatures could increase in the range of 3°C to 9°C, resulting in a shortened snowfall season and an earlier snowmelt/spring runoff;

b) annual precipitation changes are somewhat inconclusive, with estimates ranging from -20% to +40%;

c) drier summers and wetter winters are likely;

d) greater lake evaporation, resulting in decreased lake levels, on the order of 1 m or so are possible; and

e) the frequency of severe events is expected to increase with a warming climate.

The following assessment of the effects of the environment on the project therefore inherently consider the effects of climate change.

6.4.1 Likely Effects of the Environment on the Project

Effects of Extreme Weather

Severe weather conditions produce high winds, intense rainfall and possibly hail which can affect the integrity and function of the breakwater, external structures, buildings, systems and roads. Intense rainfall from severe weather may cause excessive runoff, flow rates, flooding conditions and/or erosion/sedimentation problems. Severe weather conditions may include thunderstorms and hail storms, ice storms, tornados and hurricanes, as discussed below.

Thunderstorms and hail storms are frequent occurrences and less damaging events compared to other forms of severe weather such as tornados. Thunderstorms are more common during the warmer months of the year (May to September). Damaging hail can sometimes accompany severe thunderstorms. Lightning is a common characteristic of thunderstorms that can cause serious damage to structures and interrupt power supply. Thunderstorms can damage land-based structures, buildings and systems directly through high winds, heavy rain and lightning. Thunderstorms or hail storms during the construction phase of the project could cause short-term delays. Once completed the breakwater would be unaffected by these events.

Ice storms are known to occur in southern Ontario, and may occur around the western beaches area. An ice storm could temporarily affect access to the breakwater and possibly maintenance activities. It could cause physical damage to some land-based structures, but not the breakwater itself. An ice storm during the construction phase of the project may also have an adverse effect resulting in a delay to the project.

Tornados are sometimes associated with severe thunderstorms. The distribution of tornadoes, particularly in southern Ontario, appears to be random and extremely localized. A few tornadoes or funnel clouds (tornadoes that do not reach the ground) are confirmed each year in southern Ontario. A tornado is unlikely to directly hit the breakwater and the effects of a tornado would be unlikely to affect the structural integrity of the breakwater. A tornado during the construction and development phase of the project may also have an adverse effect resulting in a delay to the project.

Hurricanes are large, intense storms which produce high intensity winds, tides and rainfall. While hurricanes are extremely rare in Ontario (Hurricane Hazel in 1956 is the only storm that has ever been officially classified as a hurricane in Ontario), the effects can be devastating. If a hurricane similar in size and characteristics to Hurricane Hazel were to pass over the western beaches area the potential effects would include flooding along the shoreline however, the breakwater itself would not be affected.

At the Toronto Island Airport the maximum sustained hourly wind speed over the climate record was 121 km/h (5 March 1964) and the maximum gusting wind was 126 km/h (26 January 1978). Severe winds are unlikely to affect the structural integrity of the breakwater, but could damage other buildings and structures. Severe winds during the construction and development phase of the project may also have an adverse effect resulting in a delay to the project.

Effects of the Design Wave and Water Levels Events

The effects of the design wave and water level events were determined through a physical model study. Physical modelling is an essential design tool for large, complex or unique coastal structures. It allows for:

a) cost optimization;
b) performance quantification; and
c) development of design details.

The model provides a clear, visual, and measurable demonstration of the performance of a structure under typical and extreme conditions. It is also used to identify/assess damage mechanisms and maintenance/repair requirements if the design conditions are exceeded. A physical model provides a much more accurate representation of the complex interaction of waves and structures than existing numerical models or empirical desktop analyses. For example, key factors that can best (or only) be evaluated and/or optimized with a physical model include:

a) armour layer stability and rubblemound cross-section details (filtering, toe scour protection and crest armouring details);

b) wave forces on fixed structures (such as vertical walled caissons and steel sheet pile cells);

c) wave runup and overtopping (and related issues with respect to safe access); and

d) wave agitation due to transmission/overtopping (these processes cannot yet be reliably simulated in numerical models, and most empirical approaches have a limited range in application);

The physical model investigation was undertaken in the "Coastal Wave Basin" (CWB) at the Canadian Hydraulics Centre in Ottawa. The CHC is a world-class hydraulics laboratory, with extensive experience in the modelling of wave-structure interaction, including rubblemound structures as well as caissons. The CWB is 14 m wide by 60 m long, and is equipped with a computer controlled hydraulic wave generator that simulates irregular waves with significant wave heights of up to 25 cm.

The model was used to undertake a detailed assessment of several breakwater design concepts. This included the measurement of wave overtopping and transmission under a range in conditions, as well as tests to assess breakwater stability under extreme wave and water level conditions. The range of modelled conditions included:

a) water levels: +0.6 m, +1.2 m, +1.5 m and +1.8 m above chart datum; and
b) waves: significant heights 0.5 to 4 m and peak periods of 5 to 10 seconds.

The design criteria for the breakwater includes:

a) structurally stable under year-round water level and wave design conditions;

b) crest height, width and details limit wave overtopping and wave transmission to levels, which provide acceptable course conditions (wave agitation) for water level and wave design conditions during the peak season;

c) adaptable to allow future access along the crest; and

d) minimize cost, considering material availability, construction methodology and schedule

Primary cost considerations include the available sizes and production rates of quarry stone and the construction technique (i.e., land or marine based construction).

Over a 50 year design life, the level of acceptable risk was set at 40% for initiation of damage to the structure and 10 to 20% for failure of the structure based on the following factors:

a) no loss of human life is expected in case of damage or failure of the structure;

b) economic repercussion of damage or failure of the structure is considered to be low (i.e., generally less than 5 times the cost of the structure);

c) environmental consequences of damage or failure of the structure is considered to be low;

d) proposed structure is a flexible structure (i.e., damage is progressive due to reserve strength of structure) and generally repairable; and

e) indirect effects would be limited to the loss of use of the course. Erosion of the shoreline would not immediately follow initial damage to the structure (i.e., repair of the protection structure could be initiated before erosion of the shoreline occurred).

A design event with a return period of 100 years has a risk of 40% of being equalled or exceeded at least once over a design life of 50 years. A design event with a return period of 500 years has a risk of 10% of being exceeded at least once in 50 years. The modelling demonstrated that the alternative breakwater designs are able to resist the environmental wave and water level forces.

Effects of Ice Conditions

Localized damage can occur as a result of ice effects (e.g., bulldozing, plucking) but ice piled on shore by wind and wave action does not, in general, cause serious damage to sloped rubblemound structures (USACE 1984; MacIntosh, Timco and Willis 1995). Typically, the net effects of ice formation are beneficial, as spray from wind and waves freezes on the structures and covers them with a protective layer of ice. Accepted practice for exposed shorelines of the Great Lakes is to size the primary armour layer to resist wave forces and consider that to be reasonably sufficient for ice conditions. It is accepted practice to repair a rubble mound structure if ice damage occurs. As a result, a monitoring program is recommended and should include inspection for damage to the cover material (especially after severe ice years) to determine if repairs are necessary. Ice interaction against vertical wall structures will be taken into consideration during final design using accepted engineering practice design guidelines for crushing strength and effect.

Effects of Subsidence

The breakwater is to be founded directly on bedrock lakebed, which eliminates the potential for subsidence of the underlying substrate.

6.4.2 Recommended Mitigation

The potential effects of the environment on the project are considered mitigable through design, standard operating, maintenance and repair procedures as described previously. Additional mitigation measures include:

a) cease all physical works or activities during periods of severe weather;
b) where appropriate, ensure all excavations are completely backfilled with appropriate materials;
c) conduct regular inspections and maintenance of all surface facilities;
d) operate all surface facilities within design specifications;
e) in the event of a structural failure, remediate structures and associated effects;
f) ensure workers wear protective equipment (i.e., hard hats, safety boots, safety vests); and
g) maintain trained work force and compliance with all occupational health and safety requirements.

6.4.3 Residual Effects

Taking into account the likely effectiveness of the breakwater design, standard construction, operating, maintenance and repair procedures, no residual adverse effects of the environment on the project are anticipated.

6.5 Environmental Effects of Possible Malfunctions or Accidents

6.5.1 Likely Project Effects Due to Accidents and Malfunctions

The likelihood of accidents and malfunctions associated with a project of this type causing significant adverse environmental effects is minimal. Public access to the breakwater is not proposed as part of the project. Nevertheless, possible accidents and malfunctions include:

a) Fuel or other material spills from machinery on site that could introduce deleterious substances to soils and Lake Ontario. Such a spill would have a negative effect on soils and sediment, surface water and groundwater quality, fish and fish habitat. Potential for spillage of hazardous materials during construction might include oil leaks from construction equipment on the barge or from on land activities. During operation, there is some potential for a spill during fuelling of a vessel. Although accidents are always possible, the likelihood of an accident resulting in significant spillage is considered to be remote.

b) Vessel collisions might occur given that the nearshore of Lake Ontario is heavily used by a variety of recreational users. Vessel collisions are rare occurrences, however should they occur, they could result in personal injuries to members of the public and workers.

c) Vessel grounding is unlikely but possible. Vessel grounding could increase the risk of personal injuries, and would disrupt navigation. Increased turbidity could result from attempts to extract the vessel off the Lake bottom. As shown in **Table 15**, there have been only four reported vessel groundings in the vicinity in the past two centuries.

Table 15. Historical Incidence of Groundings

Year	Vessel	Location/Details
1997	7.6 m cabin cruiser "Time Out"[a]	Eastern Headland, ran aground
1989	36,000 DWT bulk carrier "Federal Calumet" [b]	Grounded in fog Southeast of Eastern Gap
1856	400 T side-wheel steamer "Monarch" [c]	Stranded on Gibraltar Point
1799	Armed sail yacht "HMCS Toronto" [c]	Stranded on reef on Gibraltar (Hanlan's) Point

Note: a. Transportation Safety Board, Report Number M97C0055
b Transportation Safety Board, Case ID 16024
c Swayze (2001)

6.5.2 Recommended Mitigation Measures

The following mitigation measures are recommended to reduce the risk of accidents and malfunctions and their associated environmental effects:

Safety Practices

To reduce the risk of accidents and malfunctions and the requirements of the provincial Health and Safety Act will be adhered to. Sound safety practices will be followed on the construction site, including:

a) construction all surface facilities and foundations in accordance with approved design specifications;

b) where appropriate, ensure all excavations are completely backfilled with appropriate materials;

c) conduct regular inspections and maintenance of all surface facilities;

d) clean site of all litter and food waste to minimize attraction of wildlife;

e) operate all surface facilities within design specifications;

f) in the event of a structural failure, remediate structures and associated effects;

g) ensure workers wear protective equipment (i.e., hard hats, safety boots, safety vests); and

h) maintain trained work force and compliance with all occupational health and safety requirements.

In addition, sound safety practices will be followed on the water, including:

a) ensuring that all vessels are equipped with appropriate safety equipment and comply with Transport Canada's Small Vessel Regulations;

b) employ trained vessel operators;

c) ensure workers wear protective equipment (i.e., life vests);

d) do not operate vessels after dusk, during fog periods or severe weather events;

e) minimize vessel movements; and

f) moor vessels at marinas or designated locations on-site.

Navigation Issues

During construction the perimeter of the site will be marked with cautionary buoys and a Notice to Mariners will be posted. During operation, there is a possibility that a vessel could collide with the breakwater resulting in damage to either the vessel or the breakwater. To minimize the risk of this type of event, the breakwater will be marked with navigation lights consistent with the requirements of the Toronto Port Authority and the Coast Guard.

Given that during the summer months there is a large amount of boating activity in the inner harbour, including commercial ship traffic and a variety recreational uses, waterborne transportation of materials from the Port lands to the project site should avoid the inner harbour. if possible. To the extent possible, waterborne transportation of materials should occur during the off-season.

These mitigation measures will substantially reduce the likelihood of an incident occurring, and will help to minimize the potential for vessel collisions and the environmental effects that could result in the unlikely event of an incident.

Spill Management

In order to avoid leaks and spills, the following measures will be implemented:

a) storing all waste materials in secure areas on impermeable pads, provide berms and covers, if necessary;

b) capturing, containing and cleaning up of any surface runoff immediately;

c) ensuring that refuelling and construction staging areas where contaminants are handled are located off-site where possible, or well away from critical wildlife habitat;

d) maintaining an adequate supply of cleanup materials at the work site;

e) capture, contain and clean up spills and leaks immediately. Immediately notify local authorities of a reportable spill (i.e., typically >100 L of fuel or other operating liquid from a motor vehicle); and

f) install locks to prevent unauthorized entry to any fuel storage areas. Post warning signs.

Contingency plans are typically developed prior to construction to prepare for poor weather conditions, equipment breakdown, and spills. By preparing emergency plans and having equipment on site, the occurrence of and adverse environmental effects from these events can be minimized. Prior to a contract being issued for the construction of the project, the Contractor must develop a contingency plan that includes, but is not limited to:

a) roles and responsibilities of intervening personal
b) communication plan for operational personal
c) communication plan for government agencies and personal;
d) response techniques for various types of spills; and
e) follow-up actions.

In the event of an accidental spill of fuel oil, gasoline or paint, the following agencies are contacted:

a) Toronto Port Authority, Works Department 416-462-1260 Ext. 0. Personnel are on duty 24 hours day, 7 days a week (24/7).

b) Toronto Police Marine Unit 416-808-5800 (also 24/7).

c) Ministry of Environment 1-800-268-6060 (also 24/7). Note: Toronto Port Authority will also notify MOE.

The spill will be stopped if possible. An oil absorbent boom and/or mats will be deployed in an effort to contain the spill. The mats and booms are to be stored in a marked dockside container and are to be towed into position to absorb or contain the spill. Mats and booms will be loaded into sealed containers for appropriate treatment and/or disposal.

6.5.3 Residual Effects

Taking into account the recommended mitigation measures, accidents and malfunctions that could result in significant adverse environmental effects are considered to be unlikely. The contingency measures that have been recommended will serve to ensure that any environmental effects of an accident or malfunction are not likely to be significant. No further analysis is warranted.

6.6 Cumulative Environmental Effects

6.6.1 Methodology

Section 16(1) of the *Canadian Environmental Assessment Act* (CEA Act) requires a consideration of cumulative environmental effects in relation to the Western Beaches Watercourse project.

The Cumulative Effects Assessment Practitioner's Guide and the Canadian Environmental Assessment Agency's Operational Policy Statement provide guidance in conducting an assessment of cumulative effects to meet the requirements of the CEA Act. According to the Practitioner's Guide, a cumulative effects assessment is *"an assessment of those incremental effects of an action on the environment when the effects are combined with those from other past, existing and future actions" (pg. A1)*. In the case of the Western Beaches Watercourse project, the cumulative effects would be those incremental effects caused by this project when added to or combined with the residual adverse effects that are caused by other projects or activities off-site.

6.6.2 Effects of the Project Considered in the Cumulative Effects Assessment

The first step in the cumulative effects assessment is to determine if the project will have an adverse effect on a Valued Ecosystem Component (VEC). Beneficial effects were not considered in the cumulative effects assessment, This first step has been accomplished throughout the previous sections of this EA report. The cumulative effects assessment builds on these results and considers those incremental effects of the Western Beaches Watercourse project that were demonstrated to have a likely effect on a VEC.

6.6.3 Identification of Other Physical Works and Activities

To determine if the incremental effects identified in **Table 16** have the potential to act cumulatively with the effects of other actions, either past, existing or future, these other physical works and activities need to be identified. In accordance with the Cumulative Effects Assessment Practitioners Guide, only past, existing and reasonably foreseeable physical works and activities need to be considered in a cumulative effects assessment. Therefore, although several other physical works and activities that have been identified by stakeholders and discussed publicly they are not considered in this cumulative effects assessment because they are still in their preliminary planning stages, are not certain to occur, or are hypothetical in nature. These works are:

- Marilyn Bell park upgrades are not likely to occur at the same time that the Western Beaches Watercourse is to be constructed and the park used as a construction staging area. Rather, it is likely that the completion of the project will provide an opportunity and the impetus for the City to proceed with any upgrades that are required.
- The expansion and renewal of Ontario Place has been a subject of discussion among provincial, federal and municipal government officials for several years, however, no firm plans or designs have been developed. It is also not likely that this expansion would occur over the year when the adverse effects of the watercourse project would be the greatest. Rather the Western Beaches Watercourse may assist Ontario Place officials in developing their expansion plans in a manner that capitalizes on the benefits associated with the presence of this new watercourse.
- Humber River Deflection Pier is considered to be a hypothetical project because to date, planning and environmental assessment studies have not been initiated, no action has been taken to seek approval for the facility and no capital funds have been committed to its development.
- The Toronto World's Fair is considered to be a hypothetical project because it is subject to a competitive bidding process. Moreover, a preferred site has not yet been selected and any adverse effects are not likely to act in a cumulative fashion with those of the Western Beaches Watercourse project.
- Alterations to the Gardiner Expressway have been a subject of discussion among provincial, federal and municipal government officials for several years, however, no firm plans have been developed. Therefore, this is considered to be a hypothetical project and is not considered in the cumulative effects assessment.
- The Western Beaches Light Rail Transit Concept has recently been the subject of discussion among provincial, federal and municipal government officials, however, no firm plans or designs have been developed. Therefore, this is considered to be a hypothetical project and is not considered in the cumulative effects assessment.

Table 16. Likely Adverse Effects of Western Beaches Watercourse Project and Relevant VECs Considered

Environmental Component	Residual Adverse Effects Considered	Relevant VECs Considered
Physical Environment		
Coastal Processes	• Increased deposition of sediment at the junction where the ends of the new breakwater will be connected to the existing breakwater.	• Nearshore surface water quality • Sport fish
Terrain and Topography	• No residual adverse effects	
Soils and Sediments	• No residual adverse effects	
Surface Water Quality and Quantity	• Increased turbidity • Increased eutrophication	• Nearshore surface water quality • Sport Fish
Groundwater Quality and Quantity	• No residual adverse effects	
Biological Environment		
Wildlife / Habitat	• No residual adverse effects	
Species at Risk	• No residual adverse effects	
Vegetation and Wetlands	• Disruption to existing lawns, trees and shrubs in Marilyn Bell Park	• Waterfront recreational features (e.g., parks, beaches, trails, recreational clubs)
Migratory Birds	• No residual adverse effects	
Fish and Fish Habitat	• No residual adverse effects	
Air Quality, and Climate Change	• Decreased ambient air quality (i.e., from increased emissions and concentrations of airborne chemical pollutants, dust, smoke and other particulate matter)	Waterfront recreational features (e.g., parks, beaches, trails, recreational clubs)
Noise and Vibration	• Increased ambient noise levels and changed acoustic quality.	
Social Environment		
Land Use	• No residual adverse effects	
Local Economy	• No residual adverse effects	
Tourism and Recreation	• Disruption to on-shore recreational activities.	• Waterfront recreational features (e.g., parks, beaches and trails, recreational clubs)
Visual Setting	• Reduced lake vista	• Community character
Transportation and Navigation	• Disruption to navigation, recreational boating and other water sport uses;	• Nearshore of Lake Ontario, including the inner harbour.
Human Health	• No residual adverse effects	
Cultural Environment		
Heritage and Archaeology	• No residual adverse effects	
Aboriginal Interests	• No residual adverse effects	

Past or Existing Physical Works and Activities Considered

The Western Beaches tunnel project was completed in 2002 and is expected to be put into operation during the summer of 2005. The Western Beaches Tunnel was built to reduce the discharge of untreated stormwater and sanitary sewage into Lake Ontario. There are eight combined sewer overflows and two storm sewers located between High Park and Exhibition Place, which discharge approximately 2.9 million cubic metres of untreated stormwater and sanitary sewage a year into the lake. This occurs during periods of heavy rain or spring thaw and is the primary cause for beach closures due to bacterial contamination of the water.

The new 4 km tunnel alleviates this problem by storing wastewater for a minimum of ten hours. This retention time allows solids, such as dirt, leaves and various pollutants contained in stormwater and sewage, to settle to the bottom of the tunnel. Solids will be pumped to Ashbridges Bay Treatment Plant for further treatment. Liquids will be treated through an ultraviolet disinfection facility to reduce bacteria and then the treated liquid will be released into the lake. The project also included construction of a pump station at Strachan Avenue and landscape restoration.

Reasonably Foreseeable Physical Works and Activities Considered

The City of Toronto, the Toronto and Region Conservation Authority and the Toronto Waterfront Revitalization Corporation were contacted to identify other projects to be considered in the cumulative effects assessment. There are no major capital works planned in the study area, other than the following minor construction activities:

a) resurfacing of the Martin Goodman trail between the tennis courts at the Royal Canadian Legion and Aquatic Drive is scheduled for 2005;

b) bridge rehabilitation at Dunn Avenue, over the Canadian National Railway line is scheduled to occur in 2006; and

c) rehabilitation of a pedestrian bridge facility at Jameson Avenue pedestrian facility is scheduled for 2006.

6.6.4 Likely Cumulative Effects

The only reasonable potential for cumulative adverse effects to occur relate to the minor construction and rehabilitation works planned by the City of Toronto 2005 and in 2006. The resurfacing of the Martin Goodman Trail planned by the City of Toronto in the vicinity of Marilyn Bell Park will contribute to the emissions and concentrations of airborne chemical pollutants such as dust, smoke and other particulate matter and will increase ambient noise levels. However, it is highly unlikely that the cumulative effects

will be noticeable to trail and park users. It is also unlikely that the effects from the rehabilitation activities will be noticeable at Marilyn Bell Park. Effects of these activities are likely to be very minor and short term in duration. No further analysis is warranted.

Although the Western Beaches Watercourse project is not likely to measurably change surface water quality in the nearshore area of Lake Ontario due to potential contaminant recirculation. It is noteworthy that when the watercourse will be in operation in 2006, the Western Beaches tunnel will also be in operation. As such it is expected that the existing levels of *E. coli* at the western beaches should be reduced significantly. The Western Beaches tunnel, which has been constructed and will be put in operation for the summer of 2005, has the capacity to intercept over 95,000 m^3 of combined sewer overflow and stormwater from the outfalls previously discharging to the Western Beaches. The outfalls overflowing to the lake will be reduced to Glendale Ave, Cowan Ave and Strachan Ave. The Jameson Ave outfall will be used for overflow of the tunnel only under maintenance or emergency operations. Although the Cowan Ave outfall will still be active, the tunnel has been designed not to overflow more than twice during an average year, hence the elevated levels of *E. coli* will be significantly reduced in this area during wet weather flow conditions. As such, it is not likely that the project will cause *E. coli* levels to exceed current levels. Therefore, no adverse cumulative effect is anticipated.

6.6.5 Recommended Mitigation Measures

No mitigation measures are warranted.

6.6.6 Residual Cumulative Effects

No residual adverse cumulative effects are anticipated.

6.7 Assessment of Significance of Residual Adverse Effects

6.7.1 Assessment Methodology

The determination of significance considers the likely residual effects of the Western Beaches Watercourse Project on the environment and the potential cumulative effects of the project in combination with effects of other projects and activities. The determination of the significance of effects associated with the project was focused on residual effects that were reasonably judged to warrant such consideration. Residual effects that were clearly of a nominal nature were not advanced for evaluation of significance. In such cases, the nominal nature of the effect and the rationale for no further consideration are described in the applicable assessment sections of this report.

Taking into account the physical works and activities, accidents and malfunctions; the identified adverse environmental effects that are likely to occur and the identified mitigation measures; this section assesses the significance of each likely environmental effect and provides an overall conclusion regarding the significance of each effect. The assessment of significance is undertaken according to the following criteria:

- **Magnitude:** the size or degree of the effect compared against baseline conditions;
- **Geographic Extent**: the area over, or throughout which the effects will occur;
- **Duration**: the time period for which the effect will last;
- **Frequency:** the rate of reoccurrence of the effect (or conditions causing the effect); and,
- **Permanence:** the degree to which the effect can be or will be reversed (typically as measured by the time it will take to restore the environmental feature).

For the purposes of this EA, the significance criteria were defined and applied according to the following generic definitions **(Table 17)**.

Table 17. Criteria Ratings

Criterion	Criteria Ratings		
	Low	*Moderate*	*High*
Magnitude (of the effect)	➢ Effect is evident only at or nominally above baseline conditions	➢ Effect is likely to be measurable over baseline conditions however is less than regulatory criteria, a published guideline value, or a level that might measurably affect the quality, quantity, value or use of an environmental component or other Valued Ecosystem Component	➢ Effect may exceed a regulatory criteria, a published guideline value, or a level that might measurably affect the quality, quantity, value or use of an environmental component of other Valued Ecosystem Component
Geographic Extent (of the effect)	➢ Effect is most likely to be limited to the project site/ footprint.	➢ Effect is likely to extend into areas adjacent to the project site/footprint boundary.	➢ Effect is likely to extend into areas beyond those adjacent to the project site/footprint boundary.
Duration (of the effect)	➢ Effect is most likely to be evident only during the following phases of the project: site preparation, construction or decommissioning / abandonment.	➢ Effect is likely to be evident during site preparation, construction, decommissioning and/or operations phase of the project.	➢ Effect is likely to be evident beyond the life of the project.

Table 17. Criteria Ratings

Criterion	Criteria Ratings		
	Low	*Moderate*	*High*
Frequency (of conditions causing the effect)	➢ Conditions or phenomena causing the effect occur only once.	➢ Conditions or phenomena causing the effect occur may occur more than once, but infrequently.	➢ Conditions or phenomena causing the effect are likely to occur at regular or frequent intervals
Permanence (of effect)	➢ Effect is likely to be reversible over a short period of time (e.g., within several days or months) after the completion of the activity causing the effect.	➢ Effect is likely to be reversible over an extended period of time (e.g., a growing season, following a freshet)	➢ Effect is likely to be permanent

After the application of these ratings, an environmental effect is assessed to be either a negligible effect, a minor adverse effect or a significant adverse effect, according to the following definitions:

a) **Negligible Effect (Not Significant)** are those environmental effects which, after taking into consideration applicable mitigation measures have been rated as "low" for the majority (i.e., at least 3 out of 5) of the criteria described above and the effect cannot have been rated to be "moderate" or "high" for either the "magnitude" or "permanence" criteria. Overall, these effects are not likely to be measurable or noticeable beyond the project site / footprint boundary, are only evident during the site preparation, construction or decommissioning phases of the project or occur only once, and are completely reversible within a short period of time.

b) **Minor Adverse / Mitigable Effects (Not Significant)** are those environmental effects which, after taking into consideration mitigation measures, have been rated as "low" or "moderate" for the majority of the criteria described above. Any effect that has been rated as "moderate" or "high" for either the "magnitude" or "permanence" criteria (but not both) is considered to be a minor adverse effect (not significant).

c) **Significant Adverse Effects** are those environmental effects which, after taking into consideration mitigation measures, have a magnitude that is approaching a legal regulatory limit (i.e., moderate) or exceeds a legal limit (i.e., high) and exhibit any or all of the following:

- effect extends into areas beyond those adjacent to the project site/footprint boundary;
- effect is evident beyond the life of the project;
- conditions or phenomena causing the effect occur at regular or frequent intervals; and
- effect is permanent.

6.7.2 Significance of Residual Adverse Environmental Effects

The significance of the residual adverse effects of the Western Beaches Watercourse Facility Project is assessed in **Table 18**.

6.8 Overall Advantages and Disadvantages

The advantages and disadvantages of the overall project are summarized in **Table 19.** The items in the table were generated using the residual effects analysis, the cumulative effects analysis and the evaluation matrix used for the assessment of alternatives.

Table 19. Summary of Overall Advantages and Disadvantages

Environmental Component	Advantages	Disadvantages
Physical Environmental	• Less wave overtopping than existing breakwater • Increased quiet water area • Improvement to water quality inside the breakwater.	• Some deposition of sediment in the inside corners of the breakwater • Some increase in water turbidity in the vicinity of the project during construction.
Biological Environment	• Creation of additional fish habitat • Greater fish diversity and biomass	• Increased potential for undesirable shore bird nesting
Socio-economic Environment	• Project will serve to strengthen the western beaches as a destination • Multi-sport watercourse facility will likely serve the needs of many water sport activities • Reduction in wave reflection due to sloped sides of breakwater • Enhanced tourism potential • No increase in contaminants	• Temporary disruption to recreational and community activities and events • Disruption to navigation • Changes to boating and other water sport users
Cultural Environment	• No impacts	

The greatest advantages of the project relate to the creation of a watercourse that provides an increase in quiet water for a variety of water sport activities. The watercourse will create a destination for these users on a regular basis and will attract tourists and visitors when events are hosted. In addition, the additional habitat created for shorebirds and fish will improve the overall habitat diversity of the Lake Ontario shoreline in the City of Toronto. The primary disadvantage of the project is the disruption to activities and events during construction of the watercourse.

Table 18. Significance of Residual Adverse Effects

Environmental Components	Valued Ecosystem Component	Residual Environmental Effect (After Mitigation)	Residual Adverse Effect					Significance of Residual Adverse Effect
			Magnitude	*Extent*	*Duration*	*Frequency*	*Permanence*	
Soils and Sediments	**Nearshore Surface Water Quality** **Sport Fish**	Increased deposition of sediment at the junction where the ends of the new breakwater will be connected to the existing breakwater.	**Low** Effect is evident only at or nominally above baseline conditions	**Moderate** Effect is likely to extend into areas adjacent to the project site/footprint boundary.	**Moderate** Effect is likely to be evident during the operations phase of the project.	**High** Conditions or phenomena causing the effect are likely to occur at regular or frequent intervals	**Moderate** Effect is likely to be reversible over an extended period of time	**Minor Adverse Effect (Not Significant)**
Surface Water Quality Quantity	**Nearshore Surface Water Quality** **Sport Fish**	Increased turbidity	**Low** Effect is evident only at or nominally above baseline conditions	**Low** Effect is most likely to be limited to the project site/ footprint.	**Low** Effect is most likely to be evident only during the following phases of the project: site preparation, construction or decommissioning / abandonment.	**Moderate** Conditions or phenomena causing the effect occur may occur more than once, but infrequently.	**Low** Effect is likely to be reversible over a short period of time (e.g., within several days or months) after the completion of the activity causing the effect.	**Negligible Effect (Not Significant)**
Surface Water Quality Quantity	**Nearshore Surface Water Quality** **Sport Fish**	Increased eutrophication	**Low** Effect is evident only at or nominally above baseline conditions	**Low** Effect is most likely to be limited to the project site/ footprint.	**Moderate** Effect is likely to be evident during the operations phase of the project.	**High** Conditions or phenomena causing the effect are likely to occur at regular or frequent intervals	**Moderate** Effect is likely to be reversible over an extended period of time	**Negligible Effect (Not Significant)**
Vegetation and Wetlands	**Waterfront Recreational Features**	Disruption to existing lawns, trees and shrubs in Marilyn Bell Park	**Low** Effect is evident only at or nominally above baseline conditions	**Low** Effect is most likely to be limited to the project site/ footprint.	**Low** Effect is most likely to be evident only during site preparation, construction or decommissioning / abandonment.	**Moderate** Physical activities that may disturb vegetation will occur may occur more than once, but infrequently.	**Low** Effect is likely to be reversible over a short period of time (e.g., within several days or months) after the completion of the activity causing the effect.	**Negligible Effect (Not Significant)**
Visual Setting	**Waterfront Recreational Features**	Reduced Lake Vista	**Low** Effect is evident only at or nominally above baseline conditions	**Low** Effect is evident only at or nominally above baseline conditions	**Moderate** Effect is likely to be evident during the operations phase of the project.	**High** Conditions or phenomena causing the effect are likely to occur at regular or frequent intervals	**High** Effect is not reversible without removal of the breakwater	**Minor Adverse Effect (Not Significant)**
Air Quality and Climate Change	**Nearshore Area of Lake Ontario** **Waterfront Recreational Features**	Decreased ambient air quality (i.e., from increased emissions and concentrations of airborne chemical pollutants, dust, smoke and other particulate matter)	**Low** Changes to air quality will only be evident at or nominally above baseline conditions.	**Moderate** Effect is likely to extend into areas adjacent to the project site/footprint boundary.	**Low** Effect is most likely to be evident only during site preparation, construction or decommissioning / abandonment.	**High** During the site preparation and construction phase, conditions or phenomena causing the disruption are likely to occur at regular or frequent intervals	**Low** Effect is likely to be reversible over a short period of time (e.g., within several days or months) after the completion of the activity causing the effect.	**Minor Adverse Effect (Not Significant)**
Noise and Vibration	**Nearshore Area of Lake Ontario** **Waterfront Recreational Features**	Increased ambient noise levels and changed acoustic quality.	**Low** Changes in noise levels and acoustic quality will only be evident at or nominally above baseline conditions	**Moderate** Effect is likely to extend into areas adjacent to the project site/footprint boundary.	**Low** Effect is most likely to be evident only during site preparation, construction or decommissioning / abandonment.	**High** During the site preparation and construction phase, conditions or phenomena causing the disruption are likely to occur at regular or frequent intervals	**Low** Effect is likely to be reversible over a short period of time (e.g., within several days or months) after the completion of the activity causing the effect.	**Minor Adverse Effect (Not Significant)**
Transportation and Navigation	**Nearshore Area of Lake Ontario**	Disruption to navigation, recreational boating and other water sport uses.	**Low** The project does not preclude the use of the nearshore area for navigation.	**Moderate** Effect is likely to extend into areas adjacent to the project site/footprint boundary.	**Low** Effect is most likely to be evident only during site preparation, construction or decommissioning / abandonment.	**High** During the site preparation and construction phase, conditions or phenomena causing the disruption are likely to occur at regular or frequent intervals	**Low** Effect is likely to be reversible over a short period of time (e.g., within several days or months) after the completion of the activity causing the effect.	**Minor Adverse Effect (Not Significant)**
Tourism and Recreation	**Waterfront Recreational Features**	Disruption to on-shore recreational activities.	**Low** The project does not preclude the use of the waterfront recreational features.	**Moderate** Effect is likely to extend into areas adjacent to the project site/footprint boundary.	**Low** Effect is most likely to be evident only during site preparation, construction or decommissioning / abandonment.	**High** During the site preparation and construction phase, conditions or phenomena causing the disruption are likely to occur at regular or frequent intervals	**Low** Effect is likely to be reversible over a short period of time (e.g., within several days or months) after the completion of the activity causing the effect.	**Minor Adverse Effect (Not Significant)**

7. Description, Implementation and Monitoring of the Project

7.1 Description of the Project

7.1.1 Construction of the New Breakwater

The breakwater will consist of quarried stone of various sizes ranging from large armour stone to quarry run material. The stone material will be sourced from a number of quarries and transported by truck and/or ship or barge to Toronto. Upon arrival in Toronto, the stone will either be unloaded to a temporary stockpile at a construction staging area and then reloaded onto a barge for transport to the site or directly unloaded to a barge for transport to the site.

Two construction staging areas are being considered: one in the ship channel in the Port of Toronto and the other at the westerly section of Marilyn Bell Park, adjacent to the site. It is likely that both sites will be used during the course of the project.

Construction of the proposed breakwater is expected to be marine-based. Stone material will be barged to the breakwater site. Delivery of stone material by barge will occur about one to three times a day depending on the progress of placement. Cranes and backhoes positioned on barges will be used to unload the stone from the supply barges and place it in position on the breakwater. The construction schedule will require at least two placement crews operating concurrently. Construction will likely commence at the centre with each crew working towards opposite ends of the breakwater. Construction is dependent on the wave and ice conditions and the percentage of "down-time" (i.e., time when construction can not proceed due to adverse conditions) will vary depending on the season.

The inner core of the breakwater is placed first by building up a mound of quarry run stone directly on the lakebed. No excavation or dredging of the lakebed is proposed for the construction of the new breakwater. The stone core is shaped and graded to the specified slope and then protected by layers of larger stone with the largest stone used on the exposed outer surface. The armour stone placement commences at the toe of the slope and continues up the slope and over the crest. The new breakwater construction does not involve any blasting or pile driving.

The breakwater is extended progressively in stages. The length of unprotected stone core (i.e., stone core prior to placement of armour stone cover) typically does not exceed 25 m. The contractor is responsible for repairing storm damage to any unprotected core. The contractor will monitor the weather forecasts and will schedule the work to minimize the risk of damage due to exposure to adverse wave conditions during construction.

7.1.2 Removal of Existing Breakwater

The removal of the existing breakwater will begin after a portion of the new breakwater core is constructed and stabilized. This delay is necessary to ensure that protection for the existing shore structures is maintained. The removal of the existing breakwater will begin directly behind the constructed portion of the new breakwater. The removal will proceed at a rate and direction controlled by the progress on the new breakwater to maintain the protection for the existing shore.

The removal of the breakwater will begin with the removal of the concrete cap. The concrete will be broken up into fragments meeting core gradation requirement of the new breakwater and incorporated into the new structure. The timber crib and fill portion of the breakwater will be removed, starting at the top and progressing to the bottom. The timbers and stone are likely to be removed at the same time, but the successful contractor will modify the approach based on his equipment. The timber crib stone fill will be incorporated into the core of the new breakwater. The timber will become the property of the contractor to be disposed of in a legal manner.

Any armour stone or other materials found outside the crib and within the proposed course above the required depth will be also removed. The stones will be either incorporated into the core of the breakwater or, if meeting requirements of the outer protection layers, may be incorporated in the primary protection layers. Other material will be disposed of in a legal manner.

Once a complete segment of the crib structure is removed, the bottom of the lake will be sounded to ensure complete removal in the area. Upon completion of all removal operations, the entire area of the rowing course will be sounded to ensure that no material has been accidentally dropped in this area.

The Jameson Avenue outfall presently extends into the new watercourse which compromises the depth requirement for the CCWC event. As a result, options for addressing this are presently being pursued as part of the City's long-term outfall management policy.

7.2 Implementation of the Project

7.2.1 Notification of Completion

The last step of the Schedule 'C' Class EA process following documentation of Phases One to Three, involves issuing a "Notice of Completion" to review agencies and the public and filing the EA report for review for a period of 30 calendar days. Following the end of the review period for this EA report, if there are no outstanding Part II Order Requests, the City and TWRC may proceed to Phase 5 of the Class EA process to complete the contract drawings and tender documents, and then move on to construction.

To satisfy the notification requirements, the Notice of Completion was mailed to each of the previously contacted individuals in the project mailing list who wished to be further involved in the project, and published in the local newspapers. The notices informed stakeholders and the general public of the project's completion, including the preferred breakwater design concept and their rights regarding the Part II Order provisions.

7.2.2 Obtaining Additional Approvals

In addition to satisfying both the Municipal Class EA (Provincial) and CEA Act (Federal) processes, additional approvals and authorizations under both Provincial and Federal legislation will be required for the new multi-sports watercourse facility. These additional approvals and authorizations are summarized as follows:

Provincial	**Lakes and Rivers Improvement Act Work Permit**	The purpose of this Act is to provide for the management, protection, preservation and use of the waters of the lakes and rivers of Ontario and the land under them; the management, perpetuation and use of the fish, wildlife and other natural resources dependent on the lakes and rivers, and the protection of the natural amenities of the lakes and rivers and their shores and banks. Work permits are required for any works undertaken in a waterbody. A permit obtained under the LRIA addresses timing restrictions for in-water works according to the nature of the resident fish community. This permit is expected to be issued by MNR as part of a single process and generally follows Federal Fisheries Act authorization.
	Public Lands Act Work Permit	A permit under the Public Lands Act will be required as a result of works occurring on public lands. A Work Permit is required for the construction of the new breakwater and removal of the existing breakwater and land tenure will be required for the occupation of Crown lakebed by the breakwater. This permit is issued by MNR as part of a single process and generally follows Federal Fisheries Act authorizations.
	Ontario Regulation 158 – Fill, Construction and Alteration to Watercourse	This permitting process has been adopted by the TRCA in accordance with Section 28 of the Conservation Authorities Act. This Regulation provides the TRCA with the statutory authority to review and approve or deny permission for the construction of any structure within the Regulatory floodplain, the placement of or removal of fill material within a Regulated Area, or the alteration to any watercourse. This permit addresses sediment and erosion control issues, stormwater management details, placement of fill and slope stabilization measures. This permit also typically follows the Federal Fisheries Act authorization
Federal	**Fisheries Act**	The *Fisheries Act* sets out habitat and pollution protection provisions in Sections 22(1), 22(2), 22(3), 32, 35(2) and 37(2).
	Navigable Waters Protection Act	Construction or placement of a work in, over, under, through or across any navigable water may require approval from Transport Canada, requiring a permit under the Navigable Waters Protection Act.

7.2.3 Proposed Implementation Schedule

The Western Beaches Watercourse Facility project is being undertaken to be in-service for the IDBF Club Crew World Championships in the summer of 2006. In order to meet this obligation, the following project schedule has been developed:

- **Notice of Completion:** ..... May 31, 2005
- **Tendering and Contracting**: ..... June – July 2005
- **Construction Mobilization:** ..... August 2005
- **New Breakwater Construction:**..... August 2005 – June 2006
- **Demolition of the Existing Breakwater:** ..... September 2005 – March 2006
- **Fish Habitat Construction:** ..... December 2005 – October 2006
- **Development of other Ancillary Works:** ..... December 2005 – April 2006

This schedule was also designed to avoid major construction during the peak summer season, when the waterfront and Lake Ontario are used extensively by residents and visitors.

7.3 Monitoring of the Project

Follow-up monitoring programs are generally required to confirm assumptions in the analysis of the EA studies; verify the predictions of the EA studies and/or confirm the effectiveness of mitigation measures. Considering the negligible and minor nature of the adverse environmental effects of the project, the following monitoring and follow-up programs are proposed.

7.3.1 Construction Monitoring

Construction of the new breakwater consists of the placement of clean, inert quarried stone material. Under the MOEE Fill Quality Guidelines or Lakefilling in Ontario, quarried rock is typically considered as suitable for lakefilling as unconfined fill material. Placement will be limited to times when wave conditions allow safe construction operations. During placement of the stone there is a potential for a slight increase in turbidity. However, since only quarried stone products are to be used, the increase in turbidity is expected to be low, short-lived and limited to close proximity to the structure. A turbidity curtain is not warranted in this situation and is not practical in areas exposed to the open lake. Given the above discussion, it is believed that turbidity monitoring is not necessary and is therefore not included it as part of the mitigation measures.

As stated in Section 4.3, the substrate is comprised of bed overlain by a thin sand veneer. This lack of sediment means that during placement of stone, there is no potential for disturbance of lakebed material and no potential for sediment break-out. For this reason it is believed that sediment monitoring is not necessary and is therefore not included it as part of the mitigation measures.

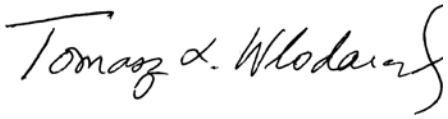
7.3.2 Post-construction Monitoring

To confirm the effectiveness of the breakwater in minimizing wave action on the leeside of the breakwater, a survey shall be undertaken of watercourse users one year after breakwater construction. Similarly, following the planned IDBF CCWC event, the event organizers shall be consulted regarding the performance of the breakwater.

To confirm if increased deposition of sediment at the junction where the ends of the new breakwater will be connected to the existing breakwater, a sounding survey shall be taken one year after breakwater construction. This sounding would be limited to the triangular area at the two ends of the facility. The breakwater shall also be inspected on an annual basis and after extreme storms to assess the extent of damage and to determine maintenance requirements.

A three year post-construction monitoring plan to determine the success of the fish habitat compensation works will be implemented as part of the authorization under the *Fisheries Act*.

Report Prepared By:



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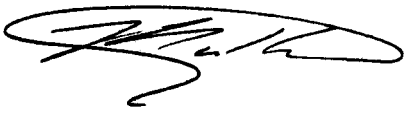

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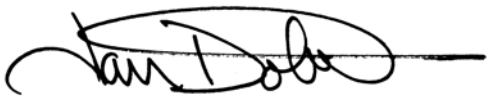

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"Thanks to the official sponsors of the Ontario Breeding Bird Atlas (Bird Studies Canada, Canadian Wildlife Service, Federation of Ontario Naturalists, Ontario Field Ornithologists, and Ontario Ministry of Natural Resources) for supplying Atlas data, and to the thousands of volunteer participants who gathered data for the project."

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Appendices

Appendix A

Sediment Report

TORONTO AND REGION CONSERVATION
WESTERN BEACHES WATERCOURSE FACILITY
AQUATIC VEGETATION AND SUBSTRATE SURVEY REPORT
DRAFT

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2. Introduction

In November 2004, Toronto and Region Conservation Authority (TRCA) undertook field work on behalf of the Toronto Waterfront Revitalization Corporation in support of the Western Beaches Watercourse Facility project. This work included mapping, sampling and data analysis related to the site's aquatic vegetation community, substrate composition and sediment quality. The results include the following:

- aquatic vegetation survey and mapping;
- substrate survey and mapping; and
- sediment collection and analysis of grain size and chemistry.

TRCA also has appended the following reports and data in support of the preparation of the baseline environmental inventory required for the project site:

- 1995-96 RoxAnn Surveys of the Toronto Harbour Nearshore Zone and Toronto Harbour, Preliminary Report;
- Summary of 1996 Sediment Quality Sampling in Humber Bay; and
- Benthic Macro Invertebrates from Humber Bay, 1996.

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3. Survey Area and Results

Four transects were traversed by boat within the proposed project site of the Western Beaches Watercourse Facility as depicted in Figure 1. Two of these transects were located outside the offshore breakwall and two were located on the leeward side of the breakwall. The survey of each transect was accomplished with the assistance of an underwater camera and a Global Position System (GPS) Unit connected to a data recorder.
Total Study Area = 328,315.77m²

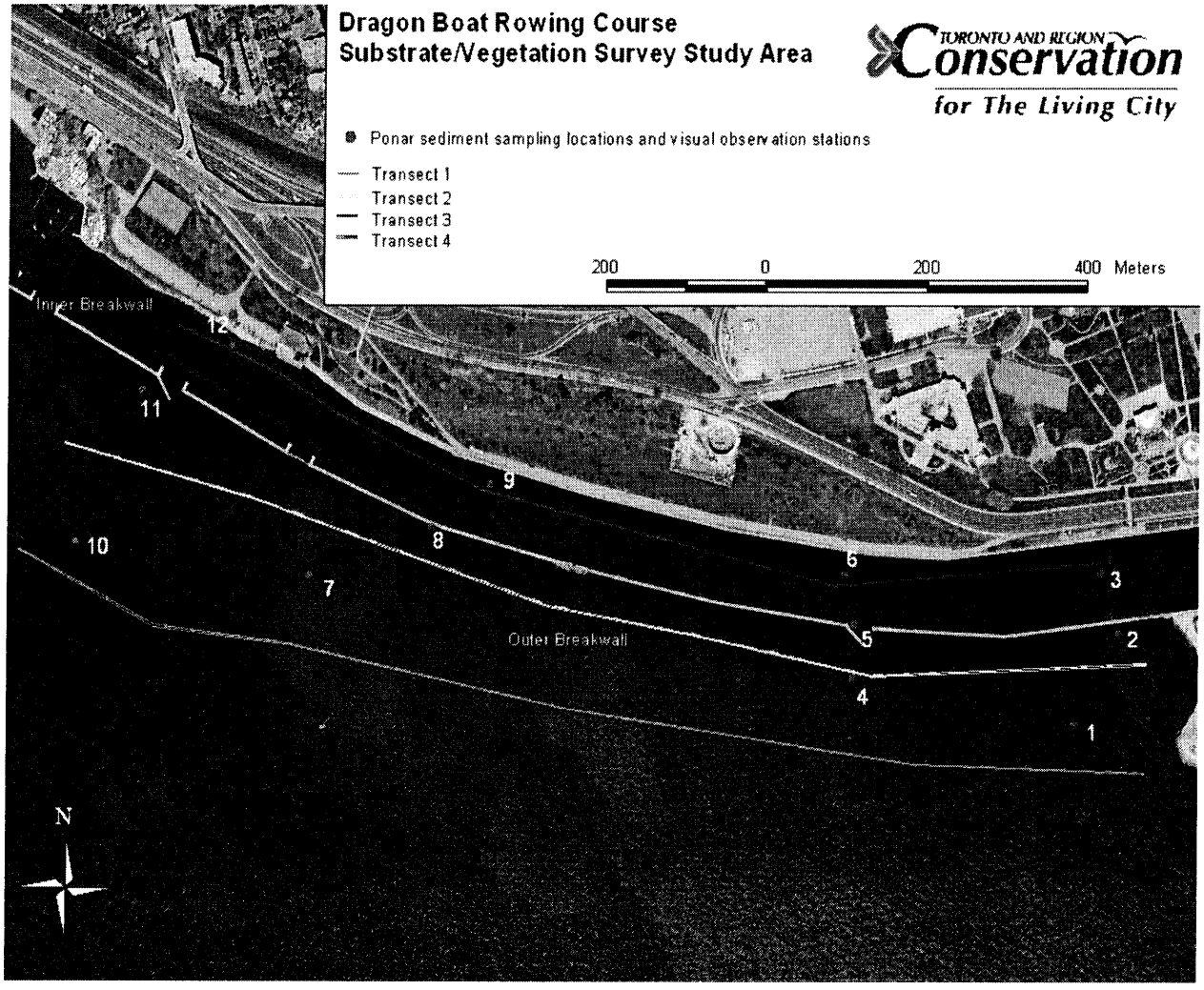


Figure 1. Western Beaches Watercourse Facility Survey Transects.

Twelve geo-referenced points were investigated and samples were collected for further laboratory analyses where possible. The results of this sampling survey are summarized below:

Point 1 – 6 m depth
Substrates within this sample station were predominantly composed of angular to subangular rock (shale). This rock averaged 50 to 150 cm in diameter and was randomly scattered throughout the sample area. Large quantities of zebra mussels (*Dressina polymorpha)* were also observed. Bottom topography appeared flat and featureless with the exception of large shale boulders. Low-lying aquatic vegetation in random areas was observed in the surrounding sampling location. Samples of the vegetation 3 to 12 cm in length were identified as Eurasian water milfoil (*Myriophyllum sibricum*). A digital photo taken of the material during the ponar grab sample is shown in Figure 2. A sufficient volume of sediments could not be collected for analyses due to the combination of hard bottom and the high density of zebra mussels present.

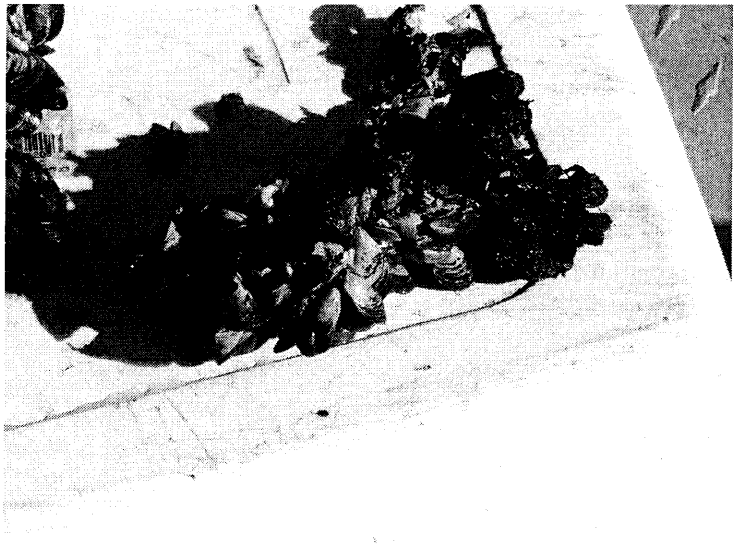


Figure 2 Ponar Grab Sample
Taken at Sample Location Point 1.

Point 2 – 4.5 m depth
Point 2 was located 4 m from the outer breakwall within the study area. Large and medium sized angular and sub-rounded cobble/boulders (20 cm - 150 cm) were dispersed throughout the station with some isolated pockets of clustered cobble/boulders. These boulders were extensively covered in zebra mussels. A minimal amount of sand was found in pockets on top of exposed bedrock. A sufficient volume of sediments could not be acquired for analysis due to the hard bottom and high density of zebra mussels.

Point 3 - 2.2 m depth
Point 3 was located 12 m from the shoreline within the inner breakwall. This site was dominated by a dense bed of aquatic vegetation dominated by Eurasian water milfoil. Some open areas of substrate within the aquatic vegetation were identified as shattered shale and rock. The diameter of this material was substantially smaller then that of the outer breakwall sites. Zebra mussel colonies on the substrates were dense. A fine veneer of silt and sand was also observed, however in volumes insufficient to collect a sample conducive to further analysis.

Point 4 - 5.3 m depth

This station revealed a very flat featureless contour. The substrate was composed 20 - 50cm rock, predominantly shale. Sand was also present but in small thin patches. Low-lying aquatic vegetation was also observed in small patches. Sampling was unsuccessful due to the density of zebra mussels.

Point 5 - depth 4.5 m
This station revealed a flat area composed of shale scattered with large round boulders. These boulders could have been used during the armouring of the breakwall as the same types of boulders are found breaking the waters surface in other areas of the breakwall. Zebra mussels dominate the substrate with some traces of sand. A sufficient volume of sediment could not be acquired for analysis.

Point 6 - depth 2.3 m
This sample station was located in a dense milfoil bed. The substrate composition included angular to subrounded cobble/boulder approximately 20 - 30cm in diameter and small patches of dense cobbles. Zebra mussels were again observed in a dense layer. A sediment sample could not be collected.

Figure 3. Substrate Sample from Point 6.

Figure 4. Sediment Sample from Point 7.

Point 7 - 6.3 m depth
This sample station consisted of a flat featureless substrate. Medium to large angular/subrounded shale was observed. This station had no sand layer and was dominated by zebra mussels. Sediment samples could not be acquired.

Point 8 - 4.0 m depth
Observations within this station displayed a predominantly flat bottom with the exception of some large angular and round rock covered by coarse sand and zebra mussels. A sufficient volume of sediment could not be acquired.

Point 9 - depth 1.5 m

This site featured a large dense bed of milfoil and Canada waterweed (*Elodea Canadensis*). The substrate characteristics were similar in composition to the previous two samples located within the inside of the breakwall. Within the aquatic plants flat were angular shale cobbles and boulders ranging from 10 to 50cm in diameter. Sediments were not present therefore no sampling was possible.

Point 10 – depth 8.6 m
Observations within this sample area demonstrated a substrate consisting largely of coarse sand. Shale was also observed but very sparse. The lake bottom at this location could be characterized as flat, featureless sand with minimal zebra mussel colonization. Ponar samples were obtained from this station due to the thicker layer of sand substrate and submitted for laboratory analysis.

Point 11 - 4.8 m depth
This station displayed a flat profile with little or no overlying sand substrate. Round and subangular rock was observed with diameters varying from approximately 30 – 100 cm. Zebra mussels were observed in high densities attached to any available rocks and bedrock. Ponar samples could not be acquired due to the hard bottom composition and high density of zebra mussels.

Point 12 - 1.3 m depth
Point 12 was located within a dense bed of Eurasian water milfoil/Canada waterweed/Richardson's Pondweed (*Potamogeton richardsonii*). Observations revealed frequent open silt and sand patches with small to medium sized angular cobbles (8 cm – 25 cm). Zebra mussels were observed in scattered clumps. Ponar samples were not obtained due to the combination of rock and thin layers of silt and sand.

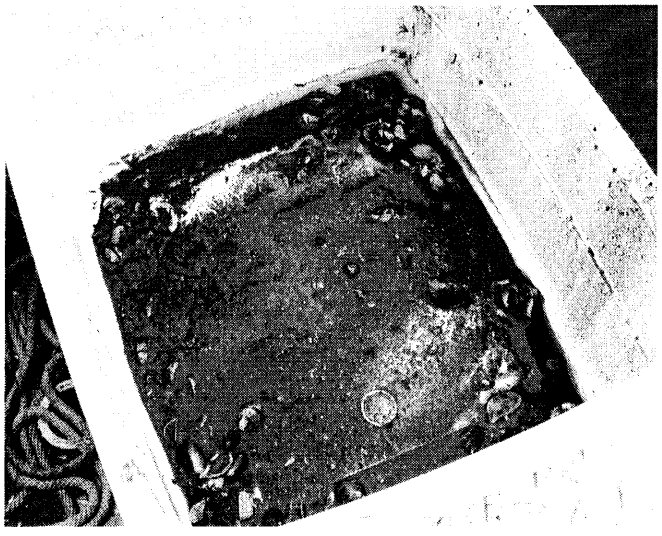


Figure 5. Substrate Sample Taken at Point 12.

4. Aquatic Vegetation

The Option 2b study area (1,300 m length of shoreline x 135 m width, located west of Ontario Place) was surveyed by two technicians via boat in November 2004. Using a Global Position System (GPS) unit connected to a data recorder, the plant communities were geo-referenced by the technicians to delineate and record the extent and type of aquatic vegetation. Geo-referenced data that was collected during the survey of each transect included aquatic vegetation species type, composition and coverage. The digital data generated by this survey was then downloaded into TRCA's Geographic Information System (GIS) database to produce an accurate map of the study area delineating the location, coverage and composition of the aquatic plant communities found within the study area.

Area of 80%-100% Coverage = 71, 064.31m²

Area of 10%-50% Coverage = 19, 232.58m²

Percent Composition by Species = 70% Eurasian water milfoil, 20% Common waterweed, 10% Richardson's Pondweed

Figure 6. Aquatic Vegetation Composition.

Between the shoreline and the existing breakwall the aquatic vegetation community is composed of a large submergent weedbed that covers approximately 85.5 % of the study area (Figure 3). Some areas are patchy but can be included in the total percent vegetation coverage. The submergent weedbed is composed of three different types of submergent aquatics; Eurasian water milfoil (*Myriophyllum sibricum)*, Common waterweed (*Elodea Canadensis)* and Richardson's pondweed (*Potamogeton richardsonii*). Observations and sampling of aquatic plant species determined a fairly uniform mixture of the submergent species mentioned. Percent coverage of each species is as follows: Eurasian water milfoil 70%, Canada waterweed 20% and Richardson's pondweed 10%. The submergent aquatic plant community has colonized primarily a hard bottom substrate. The aquatic vegetation community located outside of the breakwall is not substantial. Observations determined that the aquatic plant community in this locale consisted of small colonies of low-lying Eurasian water milfoil. This may be attributed to water depth outside of the breakwall and wave exposure.

3. Substrate

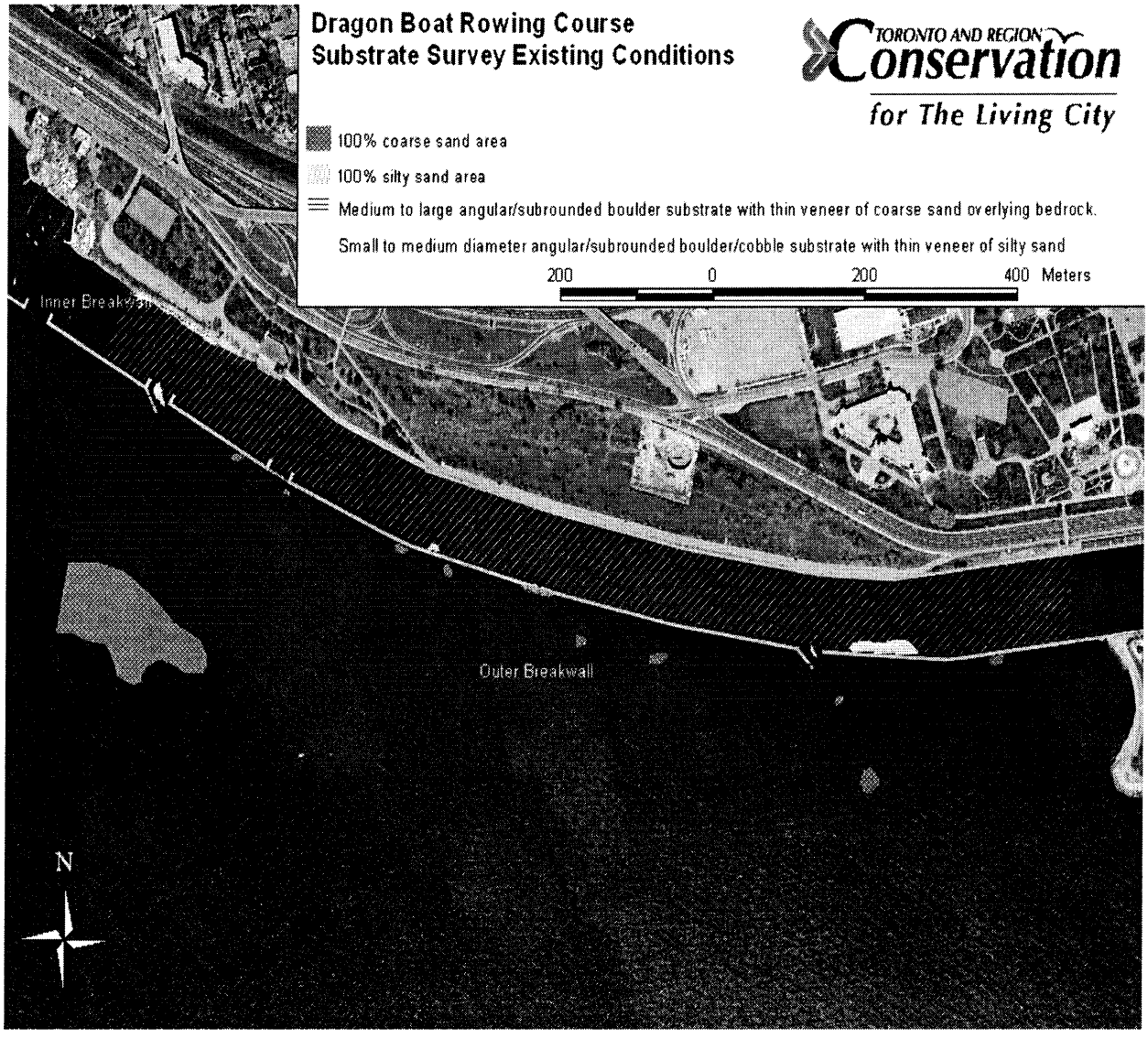
The Option 2b study area (1,300 m length of shoreline x 135 m width, located west of Ontario Place) was surveyed by two technicians via boat in November 2004. Underwater observations and substrate material were retrieved, assessed and recorded utilizing an underwater camera and GPS unit with data recorder. Quantified digital data was then downloaded into TRCA's GIS database to produce a map representing existing substrate composition and conditions. The results of these finds are depicted in Figure 4 which ddelineates the location, coverage and composition of the substrates found within the study area.

The overall composition of substrates can be described as a relatively homogenous substrate composed of angular to subrounded shale cobbles and boulders overlying bedrock with a fine veneer of sand. Some areas are more densely covered with cobbles and boulders than others, but overall the substrate characteristics do not change substantially. A thin veneer of sand is covers the entire study area to a varying degree. This sand has a silty composition and varies in thickness. The sand is susceptible to large-scale movement as a result of wave exposure. Some substantial patches do occur, but overall it is confined to small areas between rock crevices or as a thin veneer overlying the cobble/boulder substrate.

The presence of submergent aquatic plants is likely sustained by this sparse layer of fine substrate. Other aquatic life identified during the substrate surveys included both quagga and zebra mussels. The zebra mussels are found in dense colonies in approximately 75% of the study area. This dense coverage of zebra mussels is indicative of the hard bottom substrate characteristics of the study area.

On the lakeside of the breakwall, observations revealed a relatively homogenous substrate type consisting of large diameter angular to subrounded boulders (25 cm – 150 cm). These boulders are densely situated across the lake bottom, although in lesser densities than found on the inner side of the breakwall. Some smaller isolated rock piles also occur around patches of course sand. These coarse sand patches are more frequent and are larger than those found on the shore side of the breakwall within the study area. Due to the underlying bedrock these sand patches would be susceptible to movement related to the increased wave exposure.

Small to medium diameter boulder/cobble substrate with thin veneer of silty sand =104,097.24m²
Medium to large boulder substrate with thin veneer of coarse sand overlying bedrock = 206,079.15m²
Coarse sand = 16,656.15m²



Silt and sand = 1483.23m²

Figure 7. Substrate Composition.

4. Sediment

A limited number of sediment samples were collected with a ponar grab sampler ($0.05m^2$) from only one location within the defined study area due to the nature of the substrates. Sediments from Point 10 were collected using a three ponar grab technique and then homogenized to produce a single sample. Sediments designated for PCB/Pesticide analysis were placed in amber jars while the remaining samples were spooned into clear sample jars. The following parametres were tested using TRCA's contract laboratory.

(i) Grain size analysis - including total dry weight, % silt, % clay, % gravel, % sand, and the sand fractions, very coarse, coarse, medium, fine, and very fine sand (sieves [U.S. No. 10, 18, 35, 60, 120, 230], F.A.S.T. or other method). Pebble (4mm) ,gravel (2mm), very coarse sand (1mm), coarse sand (0.71-0.50mm), medium sand (0.25), fine sand (0.125mm), very fine sand (0.063mm), silt (0.002mm) and clay (<0.002mm). A percentage of the total sample dry weight for each grain size fraction will be reported for the results.

(ii) Trace Metals - Lead, Zinc, Mercury , Cadmium , Copper , Iron , Manganese , Nickel, and Arsenic.

(iii) Supplemental Metals - Antinomy, Barium, Beryllium, Chromium (total), Chromium (VI), Cobalt, Molybdenum, Selenium, Silver, Vanadium.

(vi) PCB/Pesticides - Total PCB, PCB 1254d, PCB 1248d, PCB 1016d, PCB 1260d, HCB (Hexachlorbenzene), Total DDT, p,p'-DDT, p,p'-DDE, p,p'-DDD, Mirex, Dieldrin, Endrin, BHC, alpha-BHC, beta-BHC, gamma-BHC, Chlordane, alpha-chlordane, gamma-chlordane, Oxychlordane, Aldrin, Heptachlor, Heptachlor epoxide, alpha-Endosulphan, beta-Endosulphan, Endosulphan sulphate, and Methoxychlor. Results reported in ug/g.

(vii) PAH - Total PAH, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz[a]anthracene, Chrysene, Benzo[b]flouranthene, Benzo[k]fluoranthene, Benzo[a]pyrene, Indeno[1,2,3-cd]pyrene, Dibenz[ah]anthracene), and Benzo[ghi]perylene. Results are reported in ug/g.

Results of the laboratory analysis were compared against federal and provincial sediment quality guidelines. The Canadian Sediment Quality Guidelines were developed by the Canadian Council of Ministers of the Environment (CCME). These guidelines provide reference points when evaluating potential adverse biological effects on the aquatic community (CCME, 1999). The Provincial Sediment Quality Guidelines were developed by the Ontario Ministry of the Environment to assist with the protection of aquatic biological resources (Persaud et al, 1993) and are similar in purpose to the Canadian Sediment Quality Guidelines. The Provincial Sediment Quality Guidelines replaced the Ministry of the Environment's Open Water Disposal Guidelines which were developed to establish whether dredged material is suitable for disposal in open water (Persaud et al, 1993). Results are reported in ppm unless otherwise noted.

Table 1. Grain Size Distribution.

	%
Gravel (>2.0 mm)	0
Coarse Sand (1.0-0.5 mm)	1
Medium Sand (0.5-0.25 mm)	4
Fine Sand (0.25-0.10 mm)	89
Silt (0.05-0.002 mm)	6
Clay (<0.002 mm)	0

Grain size analysis of samples collected from Point 10 indicates that the sediment is composed of fine sand. This type of substrate material seems to overlie the entire Outer Breakwall study area (see Figure 7) at varying degrees of thickness.

Table 2. Sediment Quality Guidelines for Metals.

	Threshold Effect Level (CCME)	Probable Effect Level (CCME)	Lowest Effect Level (MOE)	Severe Effect Level (MOE)	Open Water Disposal Guideline (MOE)
Antimony	-	-	-	-	-
Arsenic	5.9	17	6	33	-
Barium	-	-	-	-	-
Beryllium	-	-	-	-	-
Cadmium	0.6	3.5	0.6	10	-
Chromium	37.3	90	26	110	-
Cobalt	-	-	-	-	50
Copper	35.7	197	16	110	-
Iron	-	-	2%	4%	-
Lead	35	91.3	31	250	-
Manganese	-	-	460	1100	-
Mercury	0.17	0.486	0.2	2	-
Molybdenum	-	-	-	-	-
Nickel	-	-	16	75	-
Selenium	-	-	-	-	-
Silver	-	-	-	-	0.5
Vanadium	-	-	-	-	-
Zinc	123	315	120	820	-
Chromium (VI)	-	-	-	-	-

All values are in µg/g. Dashes indicate that no guideline currently exists for that parametre.

Table 3. Sediment Quality Results for Metals Data.

Parameter	MDL	Station 10
Antimony	1	-
Arsenic	1	1.1
Barium	1	10.3
Beryllium	0.5	-
Cadmium	0.5	-
Chromium	1	9.5
Cobalt	1	2.4
Copper	1	4.6
Iron (%)	-	0.74
Lead	2	9.5
Manganese	1	184
Mercury	0.01	0.12
Molybdenum	2	-
Nickel	2	4.2
Selenium	1	-
Silver	0.3	-
Vanadium	1	12.1
Zinc	1	30.5
Chromium (VI)	1	-

Dashes indicate concentrations below the Lab Minimum Detection Limits (MDL).

Antimony, Beryllium, Cadmium, Molybdenum, Selenium, Silver and Chromium (VI) had concentrations below lab minimum detection limits (MDL). The remaining metal parameters above lab minimum detection limits did not exceed sediment quality guidelines.

Polycyclic Aromatic Hydrocarbons (PAH's) results did not exceed laboratory minimum detection limits (MDL), therefore no results have been reported. Sediment quality guidelines for PAH's have been included for reference.

Table 4. Sediment Quality Guidelines for PAH's.

Parameter	Minimum Detection Limit	Threshold Effect Level (CCME)	Probable Effect Level (CCME)	Lowest Effect Level (MOE)	Severe Effect Level (MOE)
Naphthalene	0.04	0.0346	0.391	-	
Acenaphthene	0.04	0.00671	0.0889	-	
Fluorene	0.04	0.0212	0.144	0.19	160
Phenanthrene	0.07	0.0419	0.515	0.56	950
Anthracene	0.01	0.0469	0.245	0.22	370
Fluoranthene	0.04	0.111	2.355	0.75	1020
Pyrene	0.06	0.053	0.875	0.49	850
Benzo (a) anthracene	0.02	0.0317	0.385	0.32	1480
Chrysene	0.02	0.0571	0.862	0.34	460
Benzo (b) fluoranthene	0.06	-	-	-	
Benzo (k) fluoranthene	0.006	-	-	0.24	1340
Benzo (a) pyrene	0.04	0.0319	0.782	0.37	1440
Indeno (1,2,3-cd) pyrene	0.04	-	-	0.2	320
Dibenzo (a,h) anthracene	0.04	0.00622	0.135	0.06	130
Benzo (g,h,i) perylene	0.04	-	-	0.17	320
Total PAH	-	-	-	4	10000

The table of results for PCB's and Organochlorine Pesticides has also been excluded as the results did not exceed the laboratory minimum detection limits chosen for each parametre. A sediment quality guideline table for PCB's and Organochlorine Pesticides has been included for reference.

Table 5. Sediment Quality Guidelines for PCB's and Organochlorine Pesticides.

Parameter	Minimum Detection Limit	Threshold Effect Level (CCME)	Probable Effect Level (CCME)	No Effect Level (MOE)	Lowest Effect Level (MOE)	Severe Effect Level (MOE)
Hexachlorobenzene	0.002	-	-	0.01	0.02	24
Alpha-BHC	0.002	-	-	-	0.006	10
Gamma-BHC	0.0002	0.00094	0.00138	0.0002	0.003	1
Beta-BHC	0.002	-	-	-	0.005	21
Heptachlor	0.0002	-	-	0.0003	-	-
Delta-BHC	0.001	-	-	-	-	-
Aldrin	0.002	-	-	-	0.002	8
Heptachlor Epoxide	0.001	0.0006	0.00274	-	0.005	5
Gamma Chlordane	0.002	-	-	-	-	-
Endosulfan I	0.002	-	-	-	-	-
Dieldrin	0.002	0.00285	0.00667	0.0006	0.002	91
Endosulfan II	0.002	-	-	-	-	-
Endrin	0.002	0.00267	0.0624	0.0005	0.003	130
p,p'-DDE	0.002	0.00142	0.00675	-	0.005	19
o,p'-DDT	0.002	0.00119	0.00477	-	-	-
p,p'-DDD	0.002	0.00354	0.00851	-	0.008	6
p,p'-DDT	0.002	0.00119	0.00477	-	-	-
Endrin Aldehyde	0.002	-	-	-	-	-
Endosulfan Sulphate	0.004	-	-	-	-	-
Mirex	0.001	-	-	-	0.007	130
p,p' Methoxychlor	0.008	-	-	-	-	-
PCB Ar1016	0.01	-	-	-	0.007	53
PCB Ar1248	0.01	-	-	-	0.03	150
PCB Ar1254	0.01	0.06	0.34	-	0.06	34
PCB Ar1260	0.01	-	-	-	0.005	24

WESTERN BEACHES WATERCOURSE FACILITY
AQUATIC VEGETATION AND SUBSTRATE 2004 SURVEY RESULTS

Prepared by:
Toronto and Region Conservation

December 20, 2004

Appendix 1:
1995-96 RoxAnn Surveys of the Toronto Harbour Nearshore Zone and Toronto Harbour, Preliminary Report

Appendix 2:
Summary of 1996 Sediment Quality Sampling in Humber Bay

Appendix 3:
Benthic Macro Invertebrates from Humber Bay, 1996

Appendix B

Stage 1 & 2 Archaeological Assessments

Stage I Archaeological Assessment of Western Beaches Watercourse Facility, Lake Ontario, City of Toronto

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Archaeological PIF #P032-20 Archaeological Licence # P032

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- Ashlee Cooper, Records Management , Harbour Commissioners Office

Section 1 Background Research

1.1 Location of Subject Property

The subject property is located along Lakeshore Drive from the Argonaut Rowing Club in the west to Ontario Place in the east. Figure 1 illustrates the subject property at a scale of 1:50 000. The terrestrial portion of this project involves the construction of temporary ancillary facilities. Marilyn Bell Park is to be utilized as the staging area for the construction of the new break wall. The maritime portion of this project involves the removal of the existing break wall, 80 meters off shore and the construction of a new break wall 135 meters off shore. The project area is illustrated as Figure 2.

1.2 Project Purpose

The purpose of this project is to conduct a background check on the subject property to determine the potential for the presence or absence of any historic or prehistoric archaeological remains. Upon conclusion of the field examination a report will be submitted to the Ministry of Culture (MCL) to fulfil any conditions placed upon approval for construction on the subject property.

1.3 Project Personnel

Project Director	Leslie Currie
Background and Archival Research	Leslie Currie Patrick Folkes
Graphics	Leslie Currie
Report Writing and Preparation	Leslie Currie

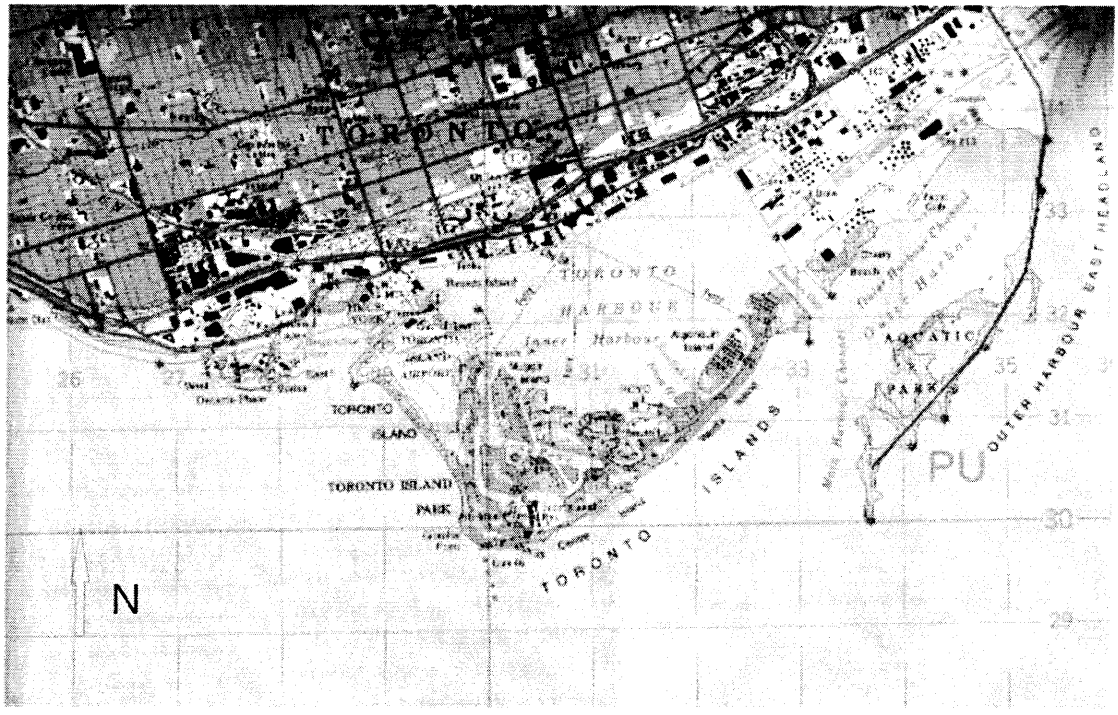


Figure 1: Location of Subject Property (1:50 000)

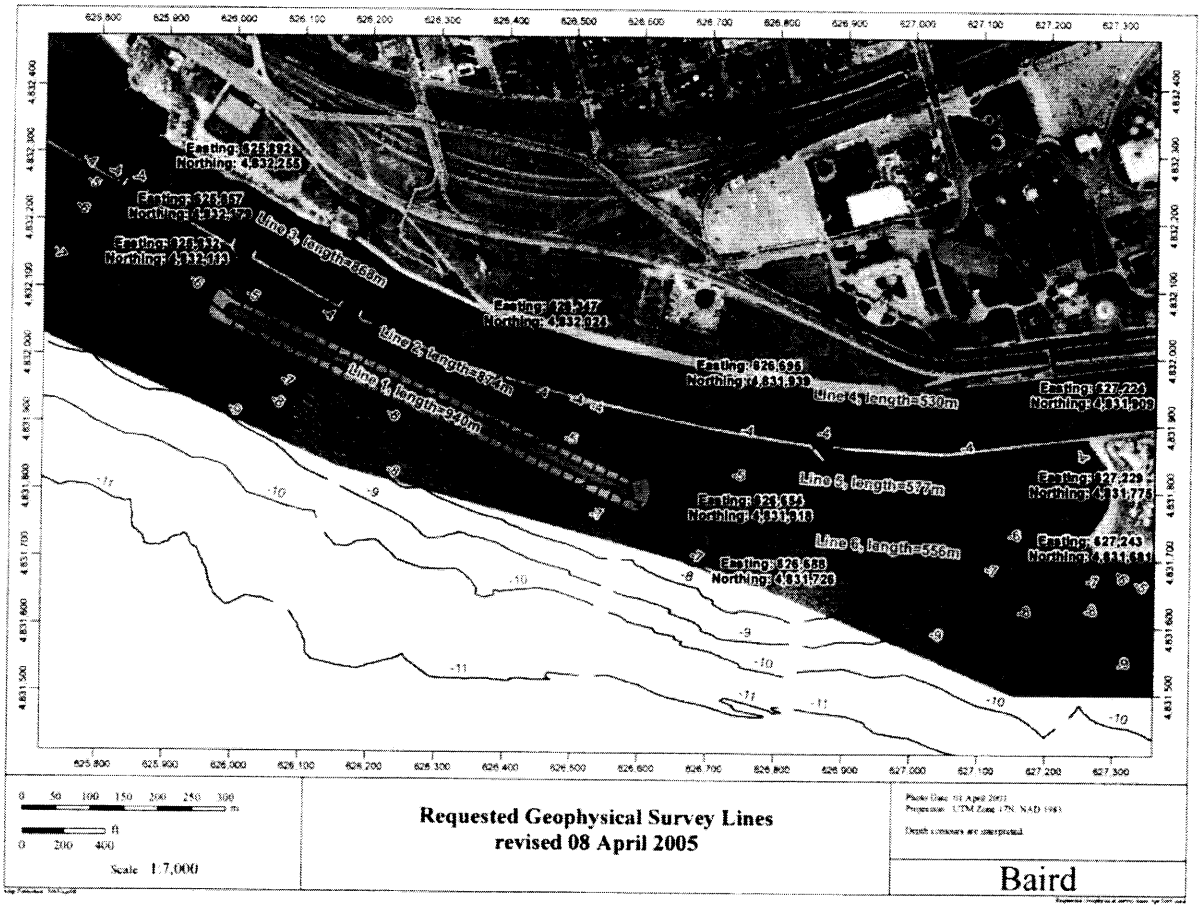


Figure 2: Preferred Location (Courtesy of Gartner Lee)

1.4 Determination of Field Methods

The Archaeological Assessment Technical Guidelines (AATG) as published by the Ministry of Culture, Tourism, and Recreation (MCTR), now the Ministry of Culture (MCL), outline the guidelines to be followed for Stages I, II & III archaeological assessments. This report and assessment are to comply with these guidelines. Terrestrial survey methods as outlined in the AATG may take two forms: pedestrian survey or shovel test pit (STP) survey. Lands that have been previously cultivated are to be ploughed for pedestrian survey. The subject property is parkland, along the shores of Lake Ontario. The disturbance of the land portion of the property involves only a portion of Marilyn Bell Park, to be used as a staging area for construction, thus, the Ministry of Culture will allow for STP survey in combination with monitoring of soil displacement.

Survey intervals for pedestrian survey and STP survey are to be conducted at five or ten meter intervals, depending on several criteria that determine archaeological potential. High potential areas are determined as those being proximal to existing or former sources of water or shorelines, rolling topography, well drained soils and/or proximity to resource procurement areas, and known archaeological sites or other heritage resources in the project area (MCTR 1993:4-5).

Relating these criteria to determine potential of the subject property, the following statements result.

1) The subject property is located adjacent to, and underneath Lake Ontario.

2) The subject property is within 100 meters to water.

3) The subject property is located within 2 kilometers of 3 registered archaeological sites. 6 additional unregistered archaeological sites are located within 2 kilometers.

4) The terrestrial and marine portion of the subject property is located on what is assumed to be made land as determined by water lots issued in the late 1800's.

These statements determine that the subject property is of moderate to high archaeological potential, thus requiring that the terrestrial survey be conducted at five meter intervals.

The marine portion of the subject property, involves the destruction of an existing break wall, the installation of a new break wall. The archaeological potential of these areas is high, and thus will require survey of any areas to be disturbed. The marine portion of the project will include a sonar survey, utilizing a remotely operated vehicle to identify any potential archaeological targets, and a video camera surveillance of the following areas: 1) the location of the new break wall and a 10 meter buffer on all sides 2) the location of the break wall to be removed, and a 10 meter buffer on either side, 3) the shoreline at the water access point in Marilyn Bell Park. The utilization of "spud barges", which are barges that sit on "feet" or pilings on the lake bed may occur, thus the 10 meter buffer around the construction area must be adhered to during construction/demolition. If disturbances are to occur outside the surveyed 10 meter buffer zone, additional survey will be required.

Section 2 Background Research

Stage 1 investigations involved the following sources: the investigation of the National Sites Registration Database, review of land use history, present condition of study area, and review of any other historical data applicable for subject lands.

2.1 National Site Registration Database

The examination of the National Site Registration Database with MCL produced the following information. There are three registered archaeological sites within two kilometers of the subject property. Two of these archaeological sites are prehistoric, in nature, belonging to the Woodland time period. The remaining registered archaeological site is the French Fort Rouillé. Fort York is a national historic site that is also located within 2 kilometers of the subject property. Five recorded shipwrecks are located within 3 kilometers of the subject area. Table 1 illustrates the registered archaeological sites. Table 2 illustrates the additional archaeological sites in the area.

Site Borden Designation	Type	Affiliation/Date
AjGu-4	Native Village	Woodland
AjGu-13	Euro-Canadian Military	French – Fort Rouillé
AjGu-29	Euro-Canadian	Domestic

Table 1: List of Registered Archaeological Sites Within 2 Kilometers

Site Name	Type	Affiliation/Date
Fort York	Euro-Canadian Military	British Fort – 1793 - present
Sligo	3 Masted Barque	Sunk 1918
Julia B. Merril	3 Masted Barque	Sunk 1931
Toronto Yacht	Schooner?	Sunk 1811
Anondaga	14 guns	Sunk and Raised 1794 – British Military
Lyman M. Davis	Schooner	Sunk 1934

Table 2: List of Additional Archaeological Sites Within 2 Kilometers

2.2 Land Use History and Present Condition

The subject property is currently a waterfront park, consisting mostly of made land. Figure 3 illustrates the location of the water lots. Table 3 lists the water lots and their dates of issue, grantor and grantee/owner.

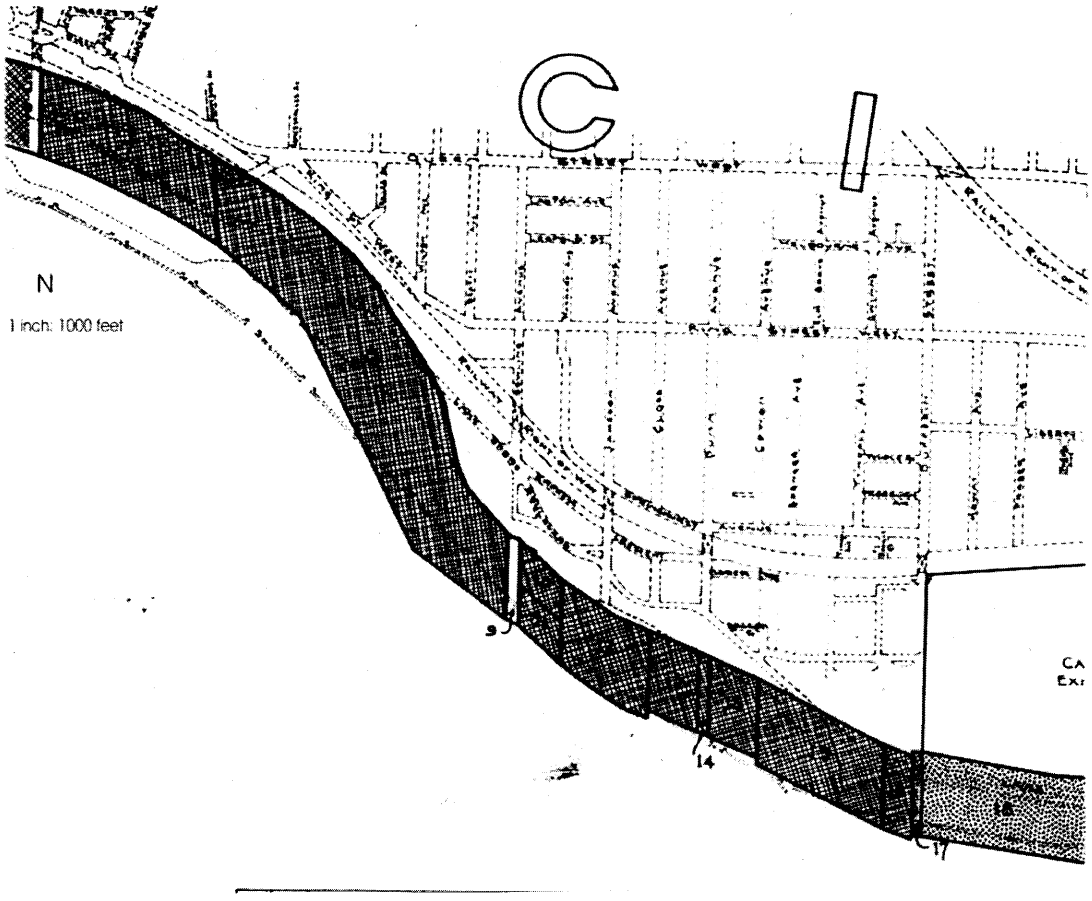


Figure 3: Harbour Commissioners Map Illustrating Water Lots and "Made Land"

Lot #	Grantor	Grantee	Date	Size (acres)	Price
8	Ontario	John Beaty	21 May 1880	50.0	$100
9	Ontario	City of Toronto	6 Oct 1890	1.0	$20
10	Ontario	Peter Desidina Conger	27 May 1875	2.5	$13
11	Ontario	Toronto General Trusts Corp. (Magann Estate)	6 June 1902	2.5	$100
12	Province of Canada	Joseph B. Spragge	1 Dec 1855	10.0	L7.10.0
13	Ontario	Patrick G. Close	19 Feb 1876	10.97	$36
14	Ontario	Crown Lands	-	10±	-
15	Province of Canada	William Charles Gwynne	8 Jan 1855	16.0	L10.0.0
16	Ontario	William Redford & James W. Hughes	28 Jan 1878	3.15	$40
17	Ontario	City of Toronto	1 Oct 1889	1.0	$40
18	Dominion	The Toronto Harbour Commissioner	28 Oct 1938	19.0	$1

Table 3: List of Water Lot Patents and Date of Issue

2.3 Archaeological Background

Native utilization of the shore area has been documented in many sites, as listed in Table 1. The density of forest and undergrowth in unsettled areas precluded travel overland in any effective manner. Native peoples of Canada were heavily dependant on waterways for travel from place to place, thus, many sites were located close to water, and closely related to navigable waterways. The number of registered prehistoric archaeological sites within the City of Toronto limits is only representative of a fraction of the sites that probably existed, due to extensive early development within the city, prior to interest in archaeological sites. The military history and early settlement of Toronto is relatively well documented historically, but as is evidenced by the archaeological work on Fort Rouillé, man things may yet be learned through proper archaeological excavation and documentation. In the report **Archaeological Mitigation at the Skydome Stadium, Toronto Ontario** By Mayer, Pihl, Poulton and Associates Incorporated, published in October 1987, the remains of Navy Wharf, Furniss Water Works Wharf, the John Street Pumping Station Wharf and the Esplanade Cribwork were all identified under "made land". Artifacts recovered included ceramics and glass and

> *"a cannonball, a gilded pocket telescope and a gold plated handle of a walking stick or parasol were recovered during the monitoring of lake sediments near the south end of Navy Wharf"* (Mayer, Pihl, Poulton and Associates Incorporated 1987:2).

2.4 Terrestrial Background

After the last glaciation, the Wisconsinan glaciation, the area became ice and water free (approximately 14,000BP). Palaeo-Indian, Archaic and Woodland occupants utilized the natural resources available in the area, including hunting, fishing, gathering and farming until the first recorded visitation by Europeans.

The first recorded Europeans to travel through the area have been reported as LaSalle, Brebeuf, Champlain. However, many traders, trappers and courier du bois were likely travelling through the Great Lakes Region, possibly soon after the establishment of Quebec City in 1608.The first preserved map of the Toronto Harbour area was surveyed and done by J.N. Mitchell in 1755. Table 4 illustrates the surveyors and the dates of their maps.

The first recorded French settlement, Magasin Royal, was one of three French trading posts built in the Lake Ontario area in the 1720's. The first was near Trenton, the second near Niagara and the third near Toronto, reportedly on or near Baby Point on the Humber River. This site is as yet undiscovered, but generally accepted in the general area of Baby Point due to the proximity to the Toronto Carrying Place.

The Toronto Carrying Place was the trail along the Humber River that was used as a portage and overland route between Lake Ontario and Georgian Bay. This trail was in use by Native groups prior to the arrival of Europeans, and continued to be used by traders, and travellers equally for several reasons. Firstly, the trail provided a sheltered route between Lake Ontario and Georgian Bay during the fall, winter and spring months, during which the Lakes are known to be inhospitable at best. The second, is that it cut off many miles of travel, as well as the portage around Niagara Falls, thus making it the easier of the two chosen routes.

Toronto's Magasin Royal was thought to be an independent functioning entity until the construction of the stone Fort at Niagara in 1727, at which point the small wooden fort/post on Baby Point was considered a "dependant" on the newer Fort, which due to its small size and dependency, was later abandoned in 1730.

The French had this presence in the Great Lakes area, and English were represented with Fort Oswego. These "presences" were felt essential to the "ownership" of the continent by English and French powers. The escalation of conflict regarding the new continent played a role in the maintenance of old posts and the construction of new posts and forts. This conflict eventually escalated into the French and English Seven Years War of 1757 - 1763.

Date	Surveyor	Area Illustrated
1755	J.N. Mitchell	Map of British Colonies in North America, incl: Fort Toronto
1755	Wm. Alexander	Map of the Great Lakes, incl. Fort Toronto
1756	J.B. Nolin	Carte Du Canada
1757	Labrocquerie	Lake Ontario, incl: all rivers, place names, insets detailing some Forts and the entire English and French Fleets
1760	D.B.	Lake Ontario, rivers, Forts Toronto, Niagara and Frontenac
1780	M.B.	Carte des Lacs du Canada incl: Fort Toronto
1788	Gother Mann	Waterfront from the Credit River, to Toronto Harbour, incl. Humber River, Toronto Carrying Place, Toronto City Lots, Toronto Island, and water depths
1789	La Force and Kotté	Lake Ontario, incl: shorelines from Humber River to Don River, possibly Fort Rouillé
1792	Joseph Bouchette	Shoreline from the Humber River into Toronto Harbour, incl: St. Johns House, a blacksmiths house, Toronto Fort, and water depths (also indicates a rocky lake bottom)
1793	A. Aitken/ Governor Simcoe	York Harbour, incl: Harbour, Toronto Island, City of York, Rivers and Creeks, and approximate water depths near shore
1796	L.M. Collins	Shoreline from Humber river into Toronto Harbour, incl: buildings, poss. Fort Rouillé
1813	Geo. Williams	Waterfront from Forts Rouillé and York, Humber River and Garrison Creek
1815	Vidal	Waterfront from Humber River into Toronto Harbour, incl: Forts Rouillé and York, Humber River and Garrison Creek, water depths, location of sandy shoal and a shipwreck
1816	Nicholls	Waterfront in Toronto Harbour, incl: Forts Rouillé and York, Western Battery, Garrison Creek, water depths, (indicates sandy and stony lake bottom)
1818	Lieut. Philpotts	Shoreline of all of Toronto Harbour, Forts Rouillé and York, Garrison Creek, water depths

Table 4: Compiled List of Historic Maps of Lake Ontario and Toronto Area.

A temporary French structure is reported to have been constructed at the mouth of the Humber to control access to the Toronto Carrying Place, the overland trade route now determined to be essential, in late 1749/ early 1750. The point of this post was to control not only access to the portage, but also to control trade with the local native groups. In the summer of 1750 a second structure was reportedly constructed. This structure is as of yet, not conclusively identified, but generally accepted to be in the Humber River, to Toronto area. In September of 1750 construction began on Fort Rouillé, located at the entrance to Toronto Harbour, now known to be in the location of the monument, on the Canadian National Exhibition Grounds.

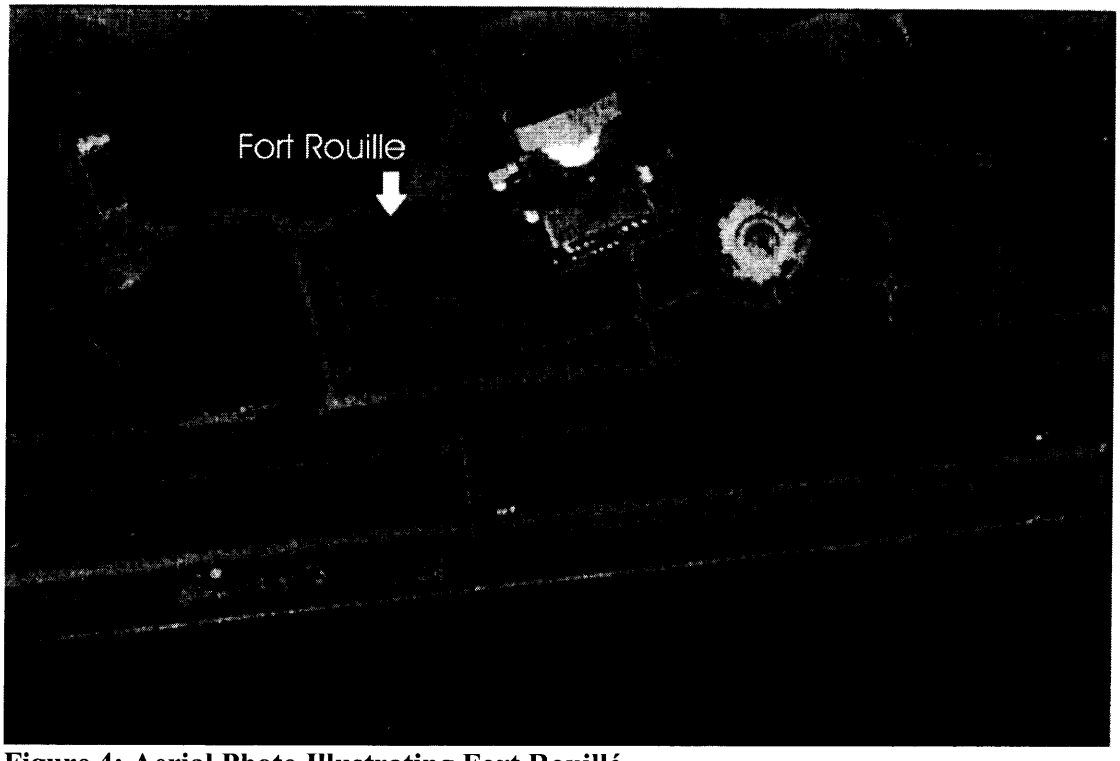
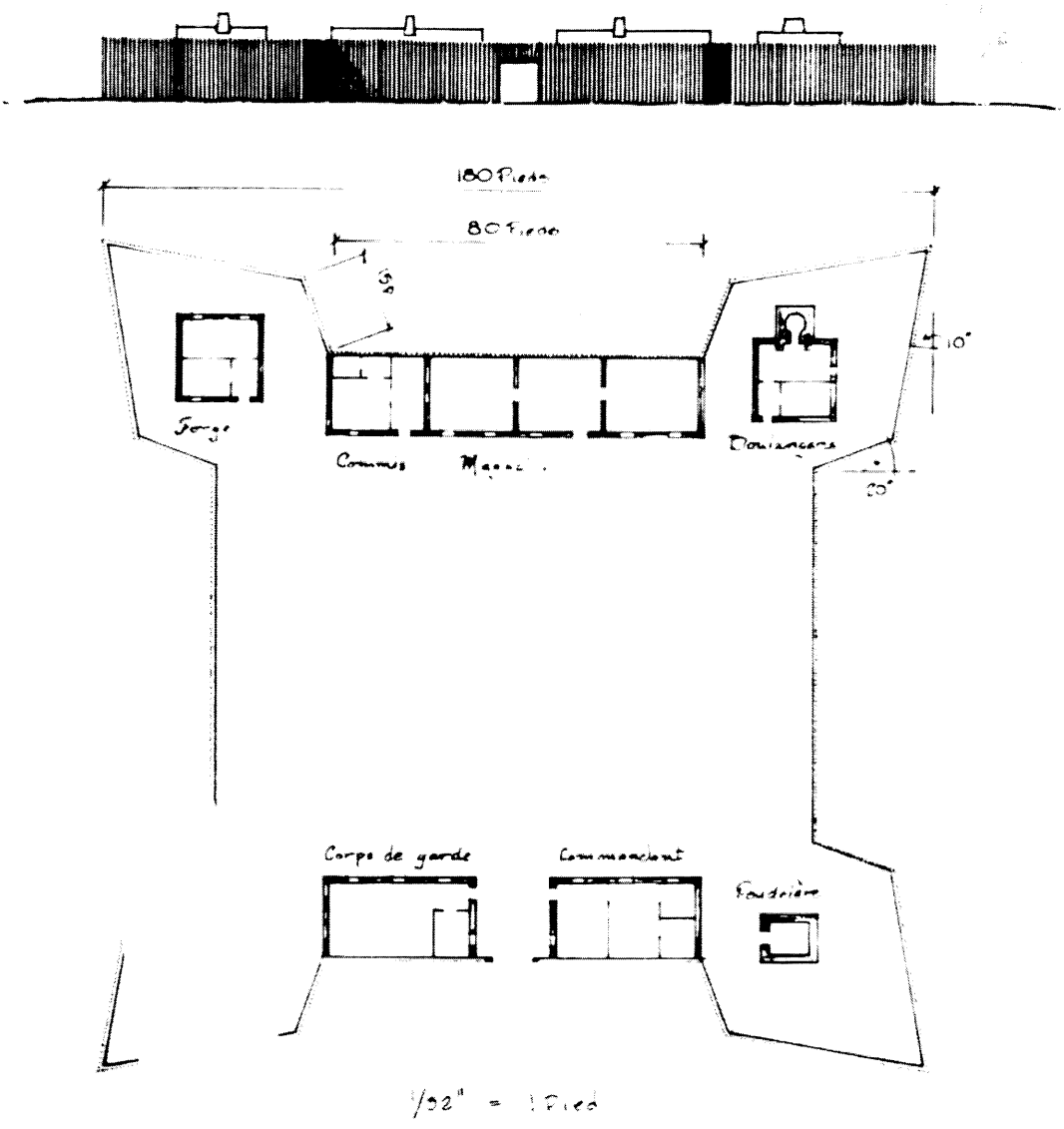


Figure 4: Aerial Photo Illustrating Fort Rouillé



FORT ROUILLÉ
PROJECTED

Figure 5: Projected Plan of Fort Rouille (Brown:1984)

Fort Rouillé, also known as Fort Toronto was occupied by as few as 7 people and as many as 16. Documentation of the Fort and its activities are minimal at best, however, we do know it's approximate time of construction from correspondence by the contactor/master carpenter Joseph Dufaux as September 1750 (Brown; 1984) and its approximate date of destruction from records of it being burned after the fall of Fort Niagara on July 25, 1759 (Brown, 1984:11). Many other people, both native and European, were reported to have lived around or near the fort, with no distinct notation of where. Records of goods traded through Fort Rouillé exist, stating number of bales of furs traded and number of canoes of "goods". No description of the "goods" are listed, however, the list of residents include a baker, a carpenter, a shopkeeper and a blacksmith. This would suggest a wide variety of goods needed to be imported, as nothing in terms of commercial goods were locally available. Also, no mention of how these goods were landed were preserved. It is possible that a long or short dock was constructed off the Fort to handle the loading and unloading of goods. It is also possible that goods were brought in canoes that were simply "beached" to load and or unload. Thirdly, it is possible that anchorages were used, and then goods transported to shore in skiffs and small batteaux, when favourable conditions permitted.

In 1787 the area along the Lakeshore was purchased from the Mississauga and in 1788, the first formal survey of what was to become the colony of York was undertaken.

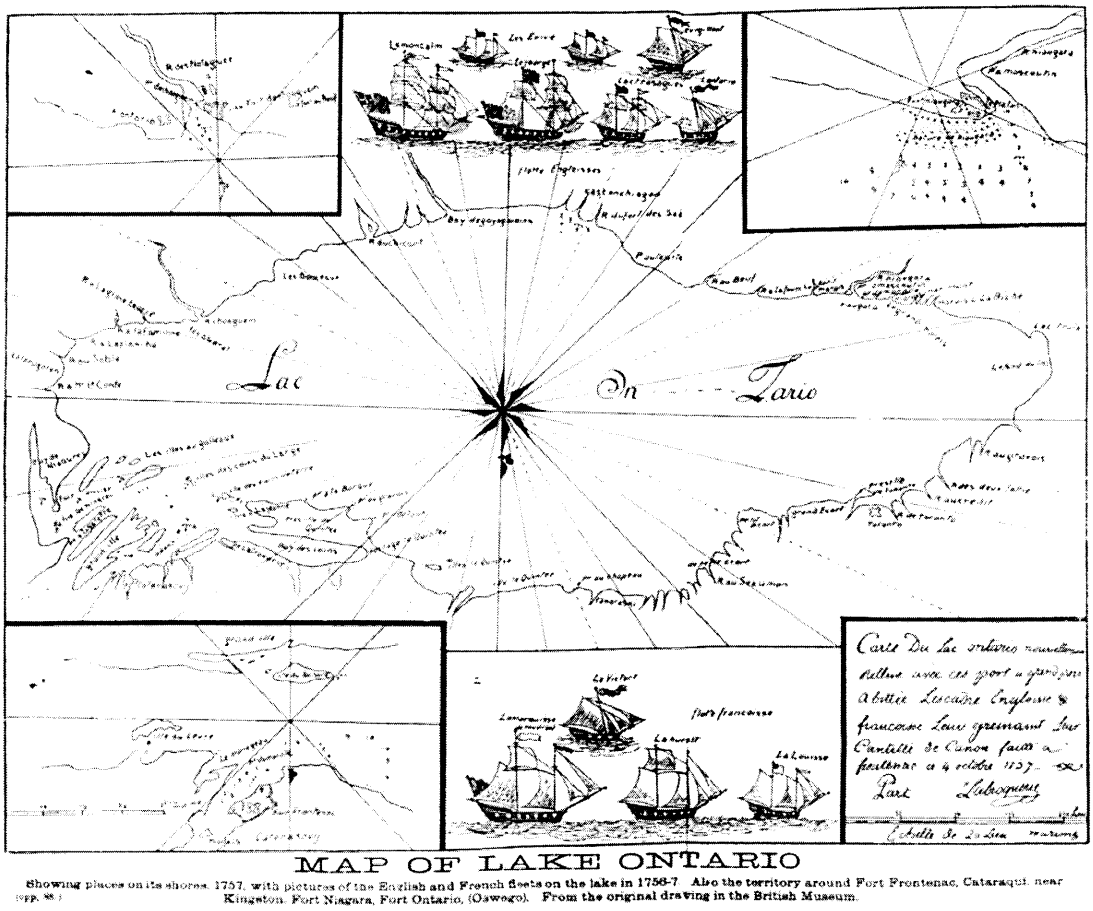


Figure 6: Labroqueire's Map of Lake Ontario dated Oct 4, 1757 (Robertson:1894)

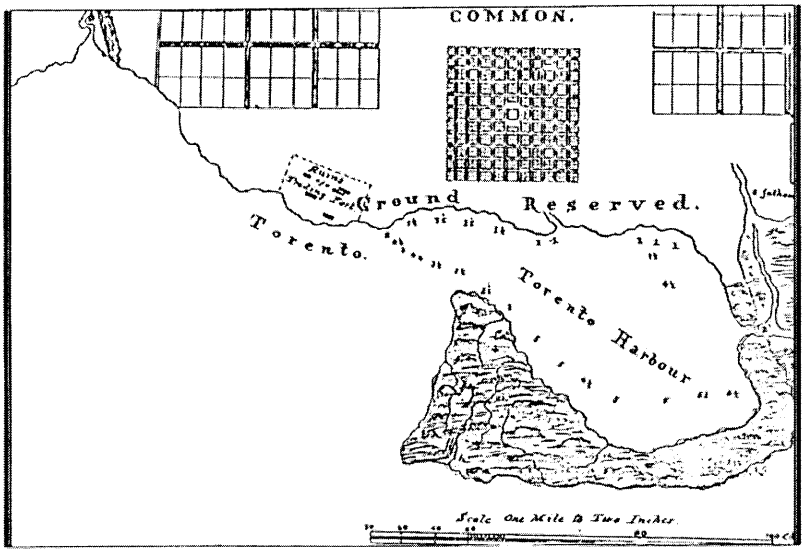


Figure 7: Mann's Map 1788 (Brown:1984)

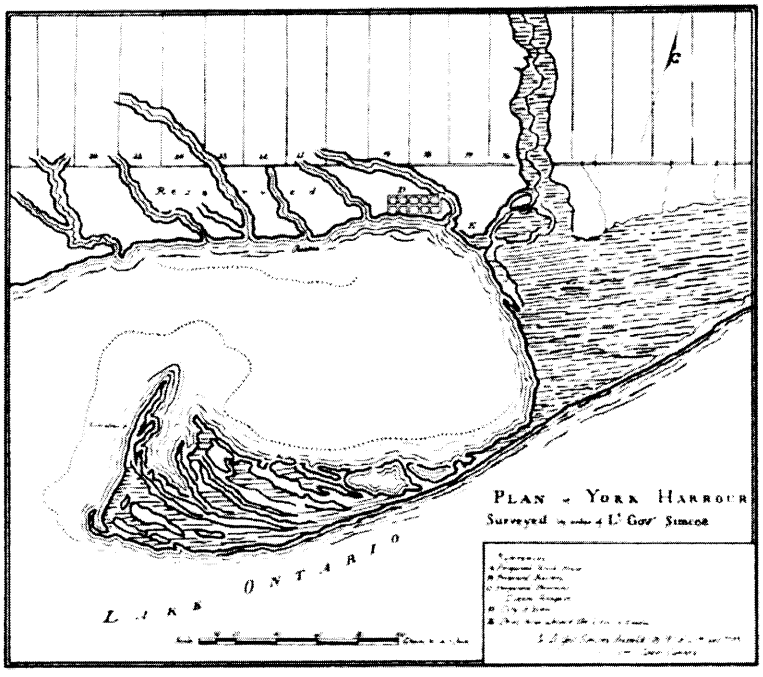


Figure 8: Governor Simcoe's Plan of Toronto Harbour dated Sept 20, 1793

The actual settlement of Toronto, then York, was begun in 1793. "[General Clark and the Queens Rangers anchored in the harbour off York...establishing themselves under canvas on the grassy glade where formerly stood the old French trading post Fort Rouillé] June 30, 1793 We can imagine them landing stores – a few cannon and some other munitions of war- from the ships, landing the parts and appurtenances of the famous canvas house which the governor has provided for the shelter of himself" (Scadding 1987;329) "Governor John Graves Simcoe ordered the construction of a garrison on the current site of Fort York in 1793" (Benn, 1993:11) From this point forward the history of Toronto is well documented, however, the development of the lakeshore and maritime aspects, are not as well recorded. Fort York was established and had a typical long dock for mooring as well as water pumps to provide water to the fort. This is illustrated on many plans of the Fort itself. The dock off Fort York became known as Queens Wharf. Table 5 illustrates the early plans of Fort York that illustrate the wharves associated with Fort York. Figures 9 and 10 illustrated the original shorelines and the extent of the docks, indicating typical dock structures for forts in the Toronto area.

Date	Surveyor	Area Illustrated
1833	-	Plan of York Harbour incl: the Queen's Wharf and shoreline between the Old Fort and Fort Rouillé.
1851	-	Plan of York Harbour incl: Fort York, New Fort, Orig. Shoreline incl. Wharves at both Forts

Table 5: Compiled List of Historic Maps of Fort York and Toronto Harbour

Additional Historic Maps include the 1877 Atlas of York County by Walker and Miles; the Town of Toronto map included here as Figure 11, illustrates the locations of Fort York and the New Fort, but has omitted the presence of Fort Rouillé. Figure 11 also illustrates the number of docks along the waterfront in Toronto, which demonstrates the importance of the maritime aspect of commerce to the development of the city.

The issuance of water lots along the study area commenced in the late 1800's. The infilling began in the water lots in the early 1900's. This created the land Lakeshore Drive currently occupies along the waters edge. Figures 12 illustrates filling in the area of the New Fort and Lakeshore Drive in 1913. Figure 13 illustrates filling in the area of Ontario Place in 1960.

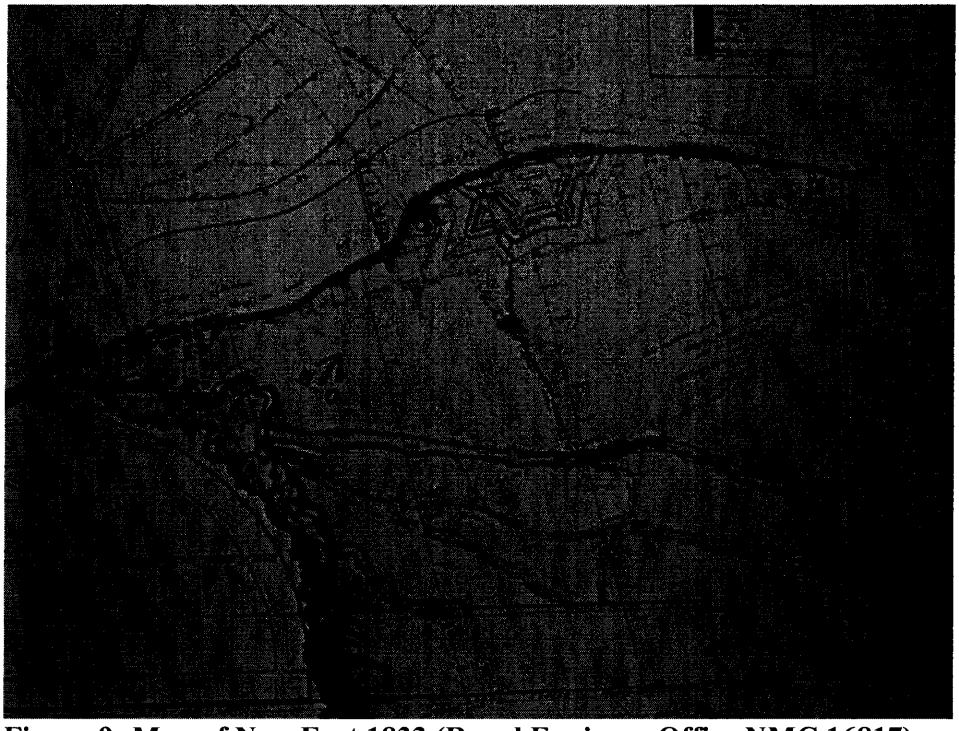


Figure 9: Map of New Fort 1833 (Royal Engineer Office NMC 16817)

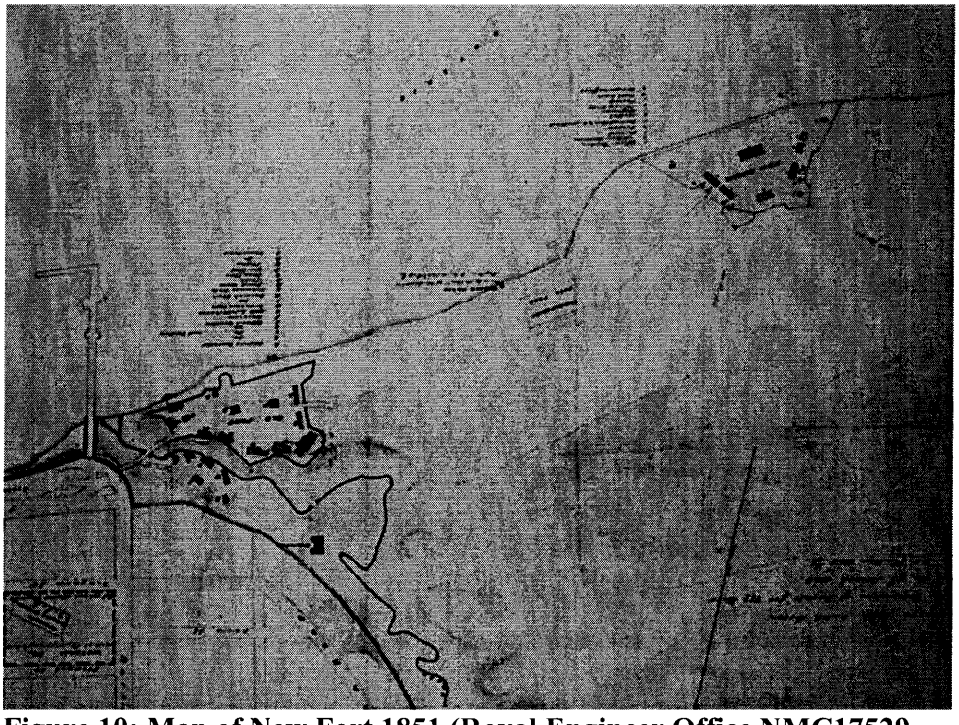


Figure 10: Map of New Fort 1851 (Royal Engineer Office NMC17529_

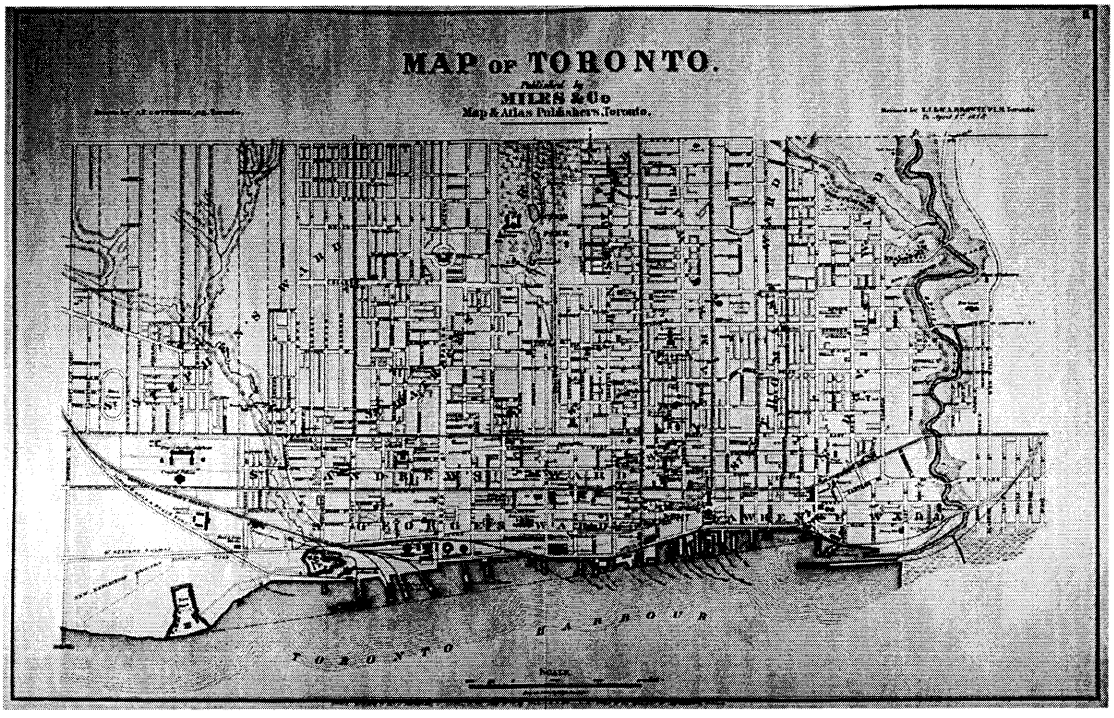


Figure 11: Walker and Miles Map of Toronto (Walker and Miles:1877)

Figure 12: Landfill in the Area of Lakeshore Drive, Facing East (1913)

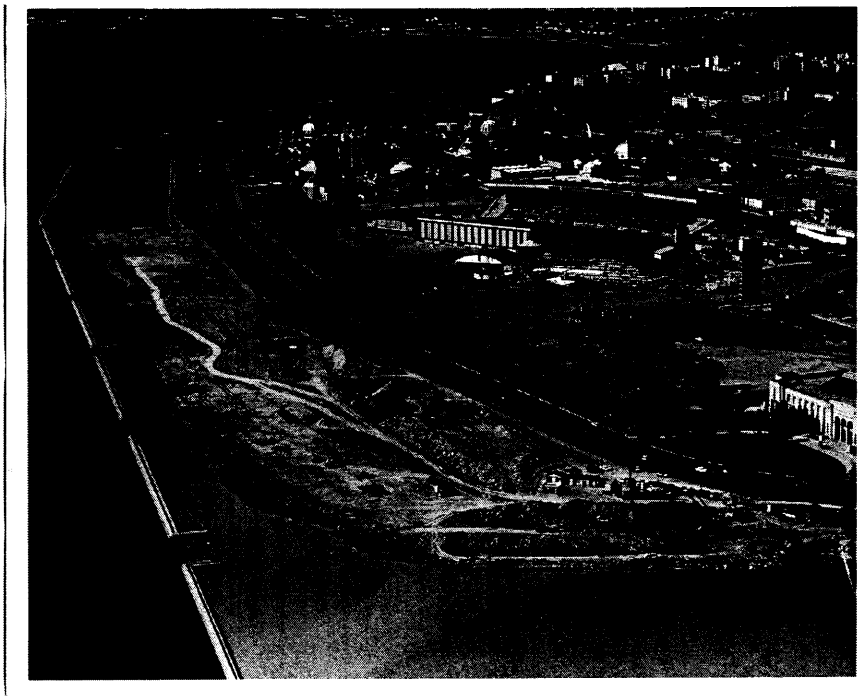


Figure 13: Landfill in the Area of Ontario Place, Facing West (Baxter:1960)

The average depth of the water lots is 660 feet from the high water mark. However, this is hard to determine from current land contours, due to drastic landscaping that has occurred along the shore in the past century. Of all the records investigated at the Ontario Archives, Fort York and The Harbour Masters Office, the Harbour Masters records indicate the original shore, in the most accurate method possible. This information has been transcribed onto the following 1: 10,000 map of Toronto, Figure 14.

The infilling of a portion of the water lots has occurred, and it is expected that the remains of any cribbing or pilings associated with the many docks that once provided access to the shore are buried under the fill from the early 20th century. Intensive survey in the area of the foot of Dufferin Street and in front of Fort Rouillé will determine the presence or absence of any remnants of these docks and or moorings.

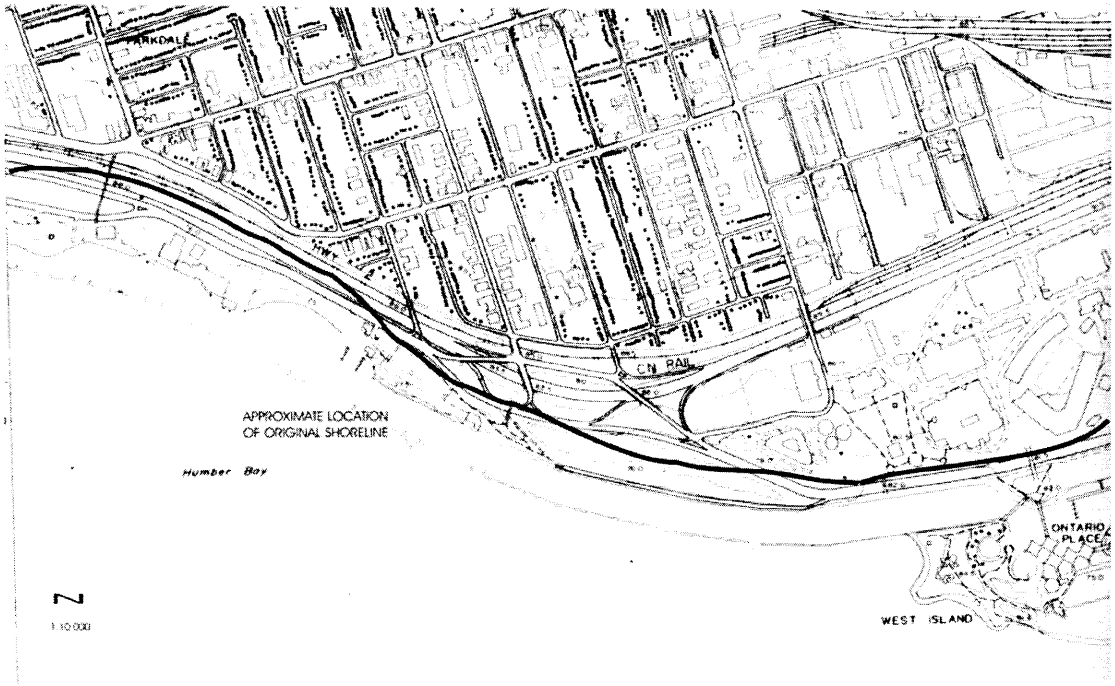


Figure 14: Current Shoreline with Approximate Original Shoreline Indicated

2.5 Maritime Background

The terrestrial history of Toronto is well documented in many sources, but the maritime history is scattered far and wide, in many obscure sources. The earliest maps, illustrated above show the importance of knowledge of the shoreline, as access to York and Toronto were only by water until the Grand Trunk Railway section between Toronto and Montreal was opened in 1856 (Glazebrook: 170).

The access to Toronto Harbour was through the Western Gap, between Gibralter Point on Toronto Island and the main shoreline, near Ontario Place. This was the only entrance to the harbour until the Eastern Gap was opened, through a portion of the barrier islands on the eastern edge of Toronto Island. The initial survey and discovery of areas on the Great Lakes System were completed by canoe and small batteaux. These were the only boats small enough to make the trip through the rapids, at the intersection of the St. Lawrence River with Lake Ontario prior to the opening of the Galops Canal, the Point Iroquois Canal and the Cornwall Canal on the 1840's (Mansfield:254). Fort Frontenac belonging to the French at Gananoque, Ontario established a yard that began shipbuilding as early as 1673 (Mansfield: 100). Fort Oswego belonging to the English at Oswego, New York established a yard that began shipbuilding in 1755 (Mansfield: 101). The main purpose of these ship builders was to build boats below the rapids, to utilize on Lake Ontario. The boats built by these two competitors were small, lake going vessels. A map and illustration by Labroquiere in 1757, illustrated here as Figure 6, represents the geographical knowledge of Lake Ontario and indicates what is thought to be the entirety of the French and English fleets. The boats as illustrated are all small one, and two masted vessels, mostly barques and schooners. Some of the forts have detailed drawings as insets, however, Fort Rouillé is only illustrated on the large map, near the lower right hand corner.

The strategic placement of French Fort Rouillé was to intercept trade with the natives in the area of the Toronto Carrying Place, as well as to limit access to the protected harbour that was to become Toronto. The possibility exists for docks of some nature off Fort Rouillé, however, no records exist, and as mentioned above, the case is equally as strong for a dock as, an anchorage, or simple beaching of small boats.

The entrance to Toronto Harbour was highly valuable, and control of access to and from the harbour was of paramount importance, which is illustrated in the following quotes:

> *In July 1793, Simcoe sent the detatchment that established the old Fort to command the only entrance to the harbour. We should remember that at that day what we now call the Island was a peninsula; in fact the Eastern Gap did not exist then. It is an artificial opening, but is now used more than the Western Gap"* (Hunter: 1929,359).

> *"The coming of Governor Simcoe into Upper Canada in 1792 was the beginning of Civil Government in this Province. In selecting Toronto, or York as he decided to call it, as the capital of the Province, the Governor was guided entirely by military considerations. Kingston, the largest settlement in the Province was turned down, because it was found incapable of being rendered defensible. Niagara was abandoned because it was under the fire of the United States guns. London which was at first selected soon gave place to York, which while perhaps not everything that was to be desired, had much in its favour. At all events, Simcoe considered it to be the most defencible position in Upper Canada. ...Even the Island, flat and barren as it was, and is, to him it was a source of military strength. ...the Governor thinks from the manner in which the mudbanks are formed that they are capable of being fortified so as to be impregnable...At Gibralter Point on the Island a blockhouse was erected in order to provide a double defence at the harbour entrance."* (Hathaway: 1929; 347-8).

The choice of Governor Graves Simcoe of the Toronto Harbour as a place for fort (Fort York) as well as a settlement, was influenced by these concerns, which in the ensuing years, was found to be a very wise decision. This is well illustrated by two letters from the War of 1812, reprinted in the Kingston Gazette from the National Intelligencer (Washington) on June 15, 1813.

> *"After a detention of some days by adverse winds, we arrived at this place yesterday morning, and at eight o'clock commenced landing the troops about three miles westward of the town, and one and a half of the enemy's works. The wind was high and in an unfavourable direction for the boats, which prevented the landing of the troops at a clear field, the seite (sic) of the ancient French fort Toronto. It prevented also many of the armed vessels taking positions, which would have most effectually covered our landing - but every thing that could be done was effected...."* From Major General Henry Dearborn, York, U.C., to John Armstrong, Secretary of War, Washington, April 28, 1813.

> *"... We arrived here yesterday morning and took a position about one mile to the south and westward of the enemy's principal fort, and as near the shore as we could with safety to the vessels. The plan fixed upon by the Major General, and myself for landing the troops was the scite (sic) of the old French Forte Tarante. / The debarkation commenced about eight o'clock A.M. and was completed about 10. The wind blowing heavy from the eastward, the boats fell to leeward of the position fixed upon and were in consequence exposed to the galling fire from the enemy, who had taken a position in a thick wood where the first troops landed...."*
> Commodore Isaac Chauncey, on board USS 'Madison', "at anchor off York", to William Jones, Secretary of the Navy, Washington, April 28, 1813.

Thus, the choice of Governor Simcoe regarding the selection of York as the capital of Upper Canada was justified and proven without a doubt. The importance of this harbour was recognized by the Natives, French, English and Americans for many reasons. Defensibility and location/proximity to trade routes and resources were paramount to all of these peoples who chose to call Toronto home.

Following the French and English war, and the War of 1812, the City of York, began to grow in earnest in peaceful times. The harbour was alive with maritime trade, and vessel traffic bringing in goods and settlers alike. Wharves were established along the shoreline beginning at the Queens Wharf (belonging to Fort York), at the base of Bathurst Street, and extending eastwards, to fill the harbour. Many artists' renditions of this period illustrate the harbour full of schooners, barques and other vessels, almost to the point of obscuring the view of the city. Figure 11 from the 1877 Atlas of York County illustrates the number and location of many of these wharves.

Also, there was a long dock off the foot of Dufferin Street. This dock was referred to in many locations. The most reputable is the Crown Patent, which was issued and recorded in the abstract to deeds October 1, 1899. The grant was 660 feet from the high water mark, into the Lake, and 66 feet wide. It is presumed from this patent, that the long dock was restricted to within these dimensions. The 660 feet was standard width for all of the water lots, and 66 feet was standard road allowance. Figure 15 illustrates the dock in front of the Crystal Palace in approximately 1882, and may also show the long dock at the Foot Of Dufferin Street.

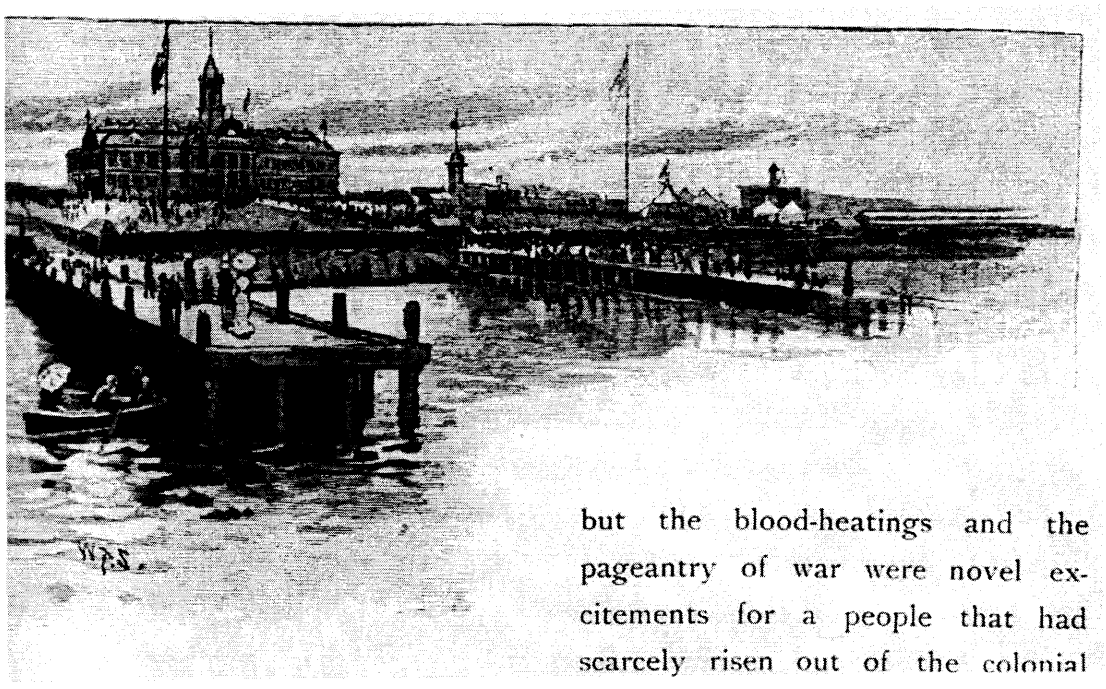


Figure 15: Wood Engraving of the Crystal Palace, Indicating Crystal Palace Dock and Possible Long Dock Off Dufferin Street (Grant:1882)

The water of Lake Ontario was utilized as the main "highway" of access to many points in Ontario for the majority of the 19th century. However, travel was not as easy as we might expect today. Ships were lost frequently to shoals, gales and unknown circumstances. Scadding's Toronto of Old illustrates these issues and the ensuing results in great detail. The following quotes are intended to be a brief synopsis of these points.

> *" Before the channel at the entrance of the harbour of York was visibly marked or buoyed, the widespread shoal to the west and south must have been very treacherous to craft seeking to approach the new settlement. In 1794 we hear of the Commodore's vessel, 'the Anondaga, of 14 guns', being stranded here and given up for lost. We hear likewise that the Commodore's son, Joseph Bouchette, the first surveyor of the harbour, distinguished himself by managing to get the Anondaga off after she had been abandoned...this exploit...Bouchette duly commemorates on his chart of York Harbour by conspicuously marking the spot where the ship lay.... A second point is likewise marked on the map, where she again grounded but was soon afterwards brought to" (Scadding 331)*

> *" We hear of the Toronto Yacht in 1805 casually. A boat puts off from her in the rescue of some persons in danger of drowning, near the Garrison at York, in November of that year. 'On Sunday last, the 10th, says the Gazette of November 16, 1805 "a boat from the river Credit for this place (York) containing four persons, and laden with salmon and country produce, overset near the Garrison, at the entrance to this harbour; and notwithstanding the most prompt assistance rendered by a boat from the Toronto Yacht, we are sorry to add that one person was unfortunately drowned and a considerable part of the cargo lost'* (Scadding: 336)

> *" It had been the fate of the Toronto Yacht, while under the command of Captain Fish, to run on the sands at Gibralter Point through a mistake as to the position of the light. Her skeleton was long a conspicuous object, visited by ramblers on the Island. This incident occurred just before the outbreak of the war"* (Scadding: 338-9).

The diving community has known of many other wrecks in Lake Ontario that attest to the volatile nature of shipping. Chris Kohl, in his book Dive Ontario, lists two wrecks and their details, as "near the mouth of the Humber". First, a ship named Sligo, a three masted barque, which had been converted to a schooner barge, sunk in 1918 in a gale. And second, the Julia B. Merril, a three masted barque, that was set alight and set loose from Sunnyside Park in July 1931 as a spectacle for a crowd (Kohl 1990: 66&68).

Section 3 Field Observations

Field visits were conducted on February 20th and March 4th, 2005.The land portion of the subject property was snow covered and the majority of the water portion of the subject area was ice covered. However, it was possible to make basic observations regarding the area. The current shoreline is artificial, resulting from the infilling in the early 20th century, following the issuance of the water lots. The original shore varies in location, but is generally located on the north side of Lakeshore Drive. The water depths are all under 6 meters in depth, and the bottom ranges from cobbles to bedrock and some silt and sand deposits across the study area. There is an existing break wall approximately 80 meters from shore, and an existing storm sewer outfall at Cowan Avenue, which extends to the existing break wall.

Photographic documentation of the field observations and locations of historic value are illustrated in Appendix A.

Section 4 Conclusions and Recommendations

The subject property is located in Lake Ontario, covering approximately 23.46 hectares between the Argonaut Rowing Club to the west and Ontario Place to the east. The intent is to remove the existing break wall 80 meters offshore, install a new break wall 135 meters offshore, and utilize Marilyn Bell Park as a staging area for this demolition and construction.

The following conclusions have been reached regarding the subject area. These conclusions may change depending on the receipt of the pending information.

1) The majority of the shoreline has been reduced drastically since the beginning of the 20th century. Land patents were issued in the early 1900's permitting filling along the lakeshore to extend the land. Further information is pending from the City of Toronto and the Land Registry office pertaining to the extent of the "made land".

2) The location of the French Fort Rouillé (near the windmill in the Canadian National Exhibition grounds) was occupied in the mid 1700's. During this time, many ships were loading and unloading trade goods in the area, with or without the use of a dock. Also, many natives came to this location as the fort was also a trading post. This creates high potential for archaeological remains directly off shore and/or buried beneath the "made land".

3) The long dock off the foot of Dufferin Street dating to the late 1800's is also located in the area directly off the CNE grounds, adjacent to Ontario Place. This creates high potential for archaeological remains directly off shore and/or buried beneath the "made land".

4) The entrance to Toronto Harbour crosses between the Toronto Island and the shore in this approximate location. This creates high potential for maritime archaeological material being recovered off shore.

5) The Carrying Place - a native and European trail along the Humber to Georgian Bay, attracted people to the area at the base of the Humber for centuries. This creates high potential for prehistoric as well as historic archaeological remains.

6) Three registered archaeological sites are recorded within 2 kilometers of the subject area. 6 unregistered archaeological sites are located within 2 kilometeres of the subject area. This frequency of sites determines that the subject property is of high archaeological significance.

7) Any development on the land adjacent to the water component has the possibility of being on "made land". Prior to any development or soil disturbance, including utilization of staging areas, the integrity of the soils will have to be assessed.

In conclusion, it has been determined that the subject property is of high archaeological significance and Stage II investigations should be conducted in the following areas.

In the marine survey the following areas should be surveyed, utilizing sidescan sonar and visual/video:

1) the new break wall, including a 10 meter buffer
2) the old break wall, including a 10 meter buffer
3) any areas of soil disturbance or displacement, including a 10 meter buffer

In the terrestrial survey the following areas should be subjected to an STP survey, utilizing 5 meter intervals, and monitoring of soil displacement during construction activities.

1) Any areas of soil displacement or disturbance.
2) The shoreline at the water access point in Marilyn Bell Park.

Section 5 References

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Baxter, Les 1960 **Photo of Landfill at Ontario Place** Parks Collection, City of Toronto, Oct 18, 1960

Royal Engineer Office
1833 **Map of New Fort** NMC 16817, Record # 19800

Royal Engineer Office
1851 **Map of New Fort** NMC 17529, Record # 21239

Simcoe, J 1793 **Plan of Toronto Harbour**, September 20, 1793

The Toronto Harbour Commissioners
1977 **Crown Grants Along Toronto Waterfront,**
D. Reed, Drawing # 16 389 File B-5-3

Unknown 1913 **Photo of Filling at Exhibition Boulevard** Feb 24, 1913

APPENDIX A: PHOTOGRAPHIC DOCUMENTATION

Photo 1: East End of Subject Area

Photo 2: Location of Fort Rouillé From Current Shoreline

Photo3: Preferred Location of Break Wall

Photo 4: Project Area, Facing East

Appendix C

Notification of Project Commencement and Public Information Centre No. 1

THE TORONTO WATERFRONT REVITALIZATION CORPORATION
AND THE CITY OF TORONTO

CLASS ENVIRONMENTAL ASSESSMENT
WESTERN BEACHES WATERCOURSE FACILITY
NOTICE OF COMMENCEMENT

The Toronto Waterfront Revitalization Corporation and the City of Toronto as co-proponents are preparing an Environmental Study Report to undertake the construction of a breakwater along the Western Beaches adjacent to Ontario Place. This construction will also include the removal of an existing breakwall currently in poor repair. The Toronto Waterfront Revitalization Corporation and the City of Toronto are considering methods and means of implementing such structure. The new breakwater will facilitate the opportunity to host the 2006 International Dragon Boat Federation World Crew Club Championships.

In accordance with the requirements for **Schedule C** projects of the **Municipal Class Environmental Assessment**, the City of Toronto and the Toronto Waterfront Revitalization Corporation are making preliminary study material and plans available for public review on:

Thursday March 10th, 2005
6:00 p.m. – 7:00 p.m. (EA Open House)
7:00 p.m. – 9:00 p.m. (Presentation and Discussion)
National Trade Centre, Exhibit Hall A, Salon 103
100 Princes' Blvd. (Exhibition Place)

Project consultants will be available to discuss issues and concerns with members of the public. Public input and comments are invited, for incorporation into the planning and design of this project and will be received until March 31, 2005. Subject to comments received and the receipt of necessary approvals, the Toronto Waterfront Revitalization Corporation and the City of Toronto intend to proceed with the planning, design and construction of this project, to be completed by August 2006.

For further information on this project, please contact:

Ms. Nancy Gaffney, B.Sc., Waterfront Specialist
Toronto and Region Conservation
5 Shoreham Drive, Downsview, Ontario, M3N 1S4
Tel: 416-661-6600, ext. 5313
Email: ngaffney@trca.on.ca

TORONTO WATERFRONT
REVITALIZATION CORPORATION

Toronto Star March 1 and 8, 2005

Class EA Western Beaches Watercourse Facility Public Forum

The Toronto Waterfront Revitalization Corporation and the City of Toronto as co-proponents are preparing an Environmental Study Report to undertake the construction of a breakwater along the Western Beaches adjacent to Ontario Place. This construction will also include the removal of an existing breakwall currently in poor repair. The Toronto Waterfront Revitalization Corporation and the City of Toronto are considering methods and means of implementing such structure. The new breakwater will facilitate the opportunity to host the 2006 International Dragon Boat Federation World

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7:00 p.m. - 9:00 p.m. (Presentation and Discussion)
National Trade Centre, Exhibit Hall A, Salon 103, 100 Princes' Blvd (Exhibition Place)

Project consultants will be available to discuss issues and concerns with members of the public. Public input and comments are invited, for incorporation into the planning and design of this project and will be received until March 31, 2005. Subject to comments received and the receipt of necessary approvals, the Toronto Waterfront Revitalization Corporation and the City of Toronto intend to proceed with the planning, design and construction of this project, to be completed by August 2006.

For further information on this project, please contact:

Ms. Nancy Gaffney, B.Sc., Waterfront Specialist
Toronto and Region Conservation
5 Shoreham Drive, Downsview, Ontario, M3K 1S4
Tel: 416-661-6600, ext. 5313
Email: ngaffney@trca.on.ca

Sincerely,
Kristin Jenkins
VP, Public Affairs

Sent by e-mail on February 25, 2005

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- Alsop Architects
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- Anishinabek Nation/ Union of Ontario Indians
- Aquatic Park Sailing Club
- Aquatic Sailing Club
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- Architect/GWNA
- Architects Alliance
- arciplan
- arco project ltd.
- AREA Architects Ltd.
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- Arnold Worldwide
- aromathera
- Art Gallery of Ontario
- Art Printing Company
- Artscape
- Arup Canada inc.
- Arxis Design
- Ashbridges Bay
- Ashbridge's Bay Community
- Ashbridges Bay Watershed
- Aspen Ridge Homes
- Association of Iroquois and Allied Nations
- Avant Gardener Ltd
- Avison Young Commercial Real Estate
- AzNet Consulting Group
- BA Consulting Group Ltd
- Baghai Development Limited
- Balmy Beach Canoe Club
- Bank of China
- Bathurst Quay Residents Association
- Bayside
- Bayside Rowing Flub
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- BBRA
- Beach Triangle Residents Association
- Beaches Business and Professional Association
- Beacon to the Ancestors Foundation
- Beanfield Technologies Inc
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- BEHAL PHOTOGRAPHY INC.
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- Belrock Design Build Inc.
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- Beyond Ability International
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- Blake Cassels & Graydon
- Blaney McMurtry
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- Bob Dey Publishing Ltd
- Booth Centennial Health Care Linen Serv.
- Borealis Capital Corporation
- Bosley Real Estate
- Boulevard Club
- BousfieldDale-HarriisCutler & Smith Inc.
- BQNA Queen's Harbour Condo Board
- Brandworks International Inc
- Brandy Lane Corporation
- Brook McIlroy
- Brook McIlroy Urban Design/Pace Architects
- Brook McIlroy/pace Architects
- Brookfield Properties Corporation
- Brookfield Residential Management Services
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- bt commercial realty inc.
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- Burnac Corporation
- Business Ass'n of Davies Ave
- C & S Insulation Inc.
- C.M. Peck
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- Can. Canoe Ass'n
- Canada Lands Corporation
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- Canadian Carolina Inc.
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- Canadian Salt Company
- CANADIAN TIRE REAL ESTATE LIMITED
- Canadian Urban Institute
- Canadian Waste Services Inc.
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- Canderel
- Canderel-Stoneridge Equity Group Inc.
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- Canpar Transport Ltd
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- Canurb
- Cassels Brock & Blackwell LLP
- Castlepoint Group
- Cathie macdonald assoc.
- CB Richard Ellis
- CBC French Radio
- CBC Radio
- CBCF and WPRA
- CBRE
- CCFEW/ Lakefront Owners
- ccr news
- CCRA
- CCRA & Centennial Rouge United Church
- Cecconi Simone
- Cedar Grove Productions
- Celestica
- Cement Association of Canada
- Central Ontario Regional Council Of Carpenters Drywall and Allied Workers
- Central Waterfront Neighbourhood Association
- CFGN
- CFMT-TV/Rogers
- CFRB
- CFTO
- CGI Consulting
- CH2M Hill Canada Ltd.
- CH2M-IDC Hong Kong Limited
- Cherry Beach - Dog Walker
- Cherry Beach Sound
- CHIN-Am and CHIN-FM
- Christopher Walker Architect
- CHRY 105.5 (York)
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- CIMCO Refrigeration
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- Circles of Support
- CIRV-FM
- Citizen at large
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- Citizens for a Lakeshore Greenway
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- Citizens of the Old Town
- Citizenship and Immigration Canada
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- City Hall Group Inc.
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- City of Seattle Department of Planning and Development
- City of Toronto
- City of Toronto - City Cycling and Sustainable Transportation
- City of Toronto - Historic Fort York
- City of Toronto - Let's Build
- City of Toronto - Parks & Recreation
- City of Toronto - Parks and Planning
- City of Toronto - Tourism Division
- City of Toronto - UPDS - Planning
- City of Toronto - Urban Development Services
- City of Toronto - Waterfront Secretariat
- City of Toronto (Medical Officer of Health)
- City of Toronto (P&D)
- City of Toronto (UDS)
- City of Toronto Better Building Fund
- City of Toronto Children's Services
- City of Toronto Councillor
- City of Toronto Cycling Committee
- City of Toronto Economic Development Division
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- City of Toronto Parks and Recreation
- City Of Toronto Toronto Island ferry
- City of Toronto Transportation Services
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- City of Toronto Works and Emergency Services Environmental Impact Assessment and Policy Development
- City Planning
- City School
- City TV
- Cityscape Development Corporation
- Civitas Inc.
- Clayton Research
- Cleveland Waterfront Coalition
- Club Management Services
- CN
- CNS
- Coastal Alternatives
- Coates-Boulton Associates Inc.
- Colliers International
- Comité waterfront Québec
- Community
- Community AIR
- Community Bicycle Network
- Community Social Planning Council
- Company
- Compass Group cAnada
- Computer Animation
- Concert Properties Ltd.
- Concord Adex Developments Corp.
- Condo Board President
- Conestoga-Rovers & Associates
- Consultant to the Candian Environmental Assessment Agency
- Context Developments (Tip Top Tailor Bld)
- Conway Davis Gryski
- Copley Wolff Design Group
- Corktown Residents & Business Association
- Corporate Services
- Corriere Canadese
- Corus Rail Consultancy
- Cossettte Communications
- Councillor Jack Layton's Office
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- Courier12 Productions
- Courtyard Group
- CPG Pte Ltd
- CPLC
- CR Management Inc.
- Craft Construction Inc.
- Creative Concern on behalf of Mersey Waterfront England
- Cresford Developments
- CSCB The Beod
- CSE
- CSP Medical
- CSR Environmental
- CTV News
- Cube Realty Advisors Ltd. Broker
- Cumming and Company (SEDERI)
- CXT Architects
- D.Z.Y. Drafting & Design Services
- Daniels Corporation
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- Darling & Downey Architects
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- Davies Howe
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- DC consulting
- DCM Enterprises
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- Delegate St. Lawrence Neighbourhood Association
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- Digital Assignments
- Dillon Building Design Ltd - Engineers/Architects

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- Don Council
- Don Regeneration Council/ Toronto Metis Council
- Don Task Force
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- Dorsay Development Corporation
- Downing International Brewery Consulting
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- Dragon Boat Canada
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- East Beach Community Association
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- Egan LLP
- Eisen Corporation
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- EllisDon Corporation
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- Energy Probe
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- Environment and Economy Coalition
- Environment Canada
- Environment Watch
- Environmental Defence Canada
- Environmental Management Solutions Inc.
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- Equality News
- ERA Architects
- ETC... News
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- Feet on the street
- Fengate Property Management Ltd.
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- FRAM Building Group
- Franz Environmental Inc.
- Freelance travel writer and former town planner
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- Harbourfront Community Centre
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- Miller Thomson LLP
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- Ministry of Municipal Affairs and Housing
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- Ministry of the Environment EA and Approvals Branch
- Ministry of Tourism and Recreation
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- Mississaugas of New Credit First Nations
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- MPCI
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- Municipal Affairs Consulting
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- O.A.L.A City of Mississauga Community Services
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- Obsession III Yacht Charters
- OCETA
- Office for Urbanism
- Office of George Smitherman MPP
- OHCC
- Ont. Growth Secretariat
- Ontario Association of Landscape Architects
- Ontario Clean Air Alliance
- Ontario Cricket Association
- Ontario Hydro
- Ontario March of Dimes
- Ontario Media Development Corporation
- Ontario Medical Association
- Ontario Mile Corporation Raceway
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- Ontario Ministry of Economic Development & Trade
- Ontario Ministry of Natural Resources
- ONTARIO MINISTRY OF TRANSPORTATION
- Ontario Motor Coach Association
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- Ontario Power Generation Inc.
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- Ontario SuperBuild
- OPG
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- Parkdale/Liberty Economic Dev. Corp.
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- Planner
- Planning & Engineering Initiatives Ltd
- Planning Action
- Platform Computing
- Plazacorp Investment Ltd
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- PMA Brethour Group
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- Polycor Granite Bussiere
- Pond Aggregates
- Port Union Homeowners Association
- Portland Community Forum
- Portlands Citizens Action Committee
- Portlands Partnership
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- President SLCRA; Director SLNA; Director SEDERI
- PRICE CONSTRUCTION MANAGEMENT SERVICES
- Prudential- First Choiuce Realty
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- Public infrastructure Renewal
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- PWL Partnership Landscape Architects
- QQ Terminal - Retail mangagement
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- Queen East Business and Residents Association
- Queen-Broadview Village BIA Toronto Historical Ass'n
- Queens Quay Disabled Sailing Program
- Queen's Quay Yachting
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- RBC Global Services
- RCDI
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- Research Group
- research western
- Resilient Channel
- re-source ontario
- reuters
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- Richard Ziegler Architect
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- Rocket Riders - Toronto Environmental Alliance
- Rockport Construction Sevices Inc
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- Rogers Community Television (Scarborough)
- Rouge Valley Foundation
- Row Ontario
- Rowing CAnada
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- School of Urban and Regional Planning Queen's University
- Scotiabank Manager Executive Offices Audit Department
- SEACOR Environmental Inc.
- SeaWell Services International GmbH
- SEDERI
- Seneca College
- SENES Consultants Limited
- SETIAO
- Several construction magazines
- Sharp & Diamond Landscape Architecture & Plannning
- shb
- Sheffield Hallam University
- Shore Tilbe Irwin & Partners
- Showline Limited
- Sierra Club of Canada & Toronto Renewable Energy Cooperative
- Sightell Productions Inc.
- Sinpyeong Architects & Associates
- SLCRA
- SLNA
- Smith Company Commercial Real Estate Inc.
- SNC - Lavalin Inc.
- Sokol Toronto
- Solo Enterprises
- Solomon E.T.C.
- Somerset Chev orvette
- Sorensen Gravely Lowes
- Soskolne Associates
- Sounds Virtual Inc.
- South Beach Condos
- South East Downtown Neighbourhood Alliance
- South Parkdale Residents Alliance
- South Riverdale Community Health Centre - South Riverdake Oartnership
- South Riverdale Revitalization Project
- South Rosedale Ratepayers' Association
- Southbeach Town Home Association
- Spectrum
- Spencer Golf Concepts
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- St Lawrence Community Centre
- St Lawrence Neighbourhood Association
- St. James Town Sailing Club
- St. Lawrence Condos Ratepayers Association
- St. Lawrence Market BIA SEDERI
- St. Lawrence Neighbourhood Association
- St. Lawrence Neighbourhood Community Bulletin
- St. Lawrence on the Park
- St. Mary's Cement Inc.
- St. Paul Guarantee
- State Building Corporation
- Step Stones to the Don
- Sterling Finlayson Architects
- Stikeman Elliott
- STOCHASTIC RESEARCH ENTERPRISES
- Stolport Corporation
- Strada Aggregates

Notice of Commencement E-mail Recipients

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- Suimon Engineering Canada Ltd.
- Sultan Cooperative
- Sunarts Design
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- SUPERIOR TRAIL BRIDGES INC.
- Suportive Housing Coalition of Metro Toronto
- Sussex Strategy Group
- Sustainable Edge Inc.
- Sutton Associates
- Sutton Group Reality
- Sweeney Sterling Finlayson Architects
- Swimjelly Design
- Talbot Consultants
- TALES of the EARTH : Landscape Architecture
- Tandem / Corriere Canadese
- TAP
- Task Force to Bring Back the Don
- Task Force to Bring Back the Don/Don watershed Council
- TBE Group Inc.
- TCR
- TD Plannning & Development Services
- TDSB
- Teamsters Union
- TEDCO
- Teksign Inc
- Telelatino
- Telnor International Ltd
- TEV
- TFBBD
- The Annex Gleaner
- The Avro Group
- The Boston Consulting Group
- The Brand Factory
- The Caribbean Camera
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- The Daniels Corporation
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- The Docks
- The Edilcan Group
- The Globe and Mail
- The Inquirer.net (Media)
- The Jewish Tribune
- The Kirkland Partnership
- The Liberty Gleaner newspaper
- The Mississauga's of the New Credit
- The National Ballet of Canada
- The Ontario Food Terminal
- The Planning Partnership (TPP)
- The Rivers Studio LLC
- The Sheridan Institute for Technology and Advanced Learning
- The Sorbara Group
- The Toronto Star
- The Toronto Sun
- the university of waterloo
- The Varsity Newspaper
- The Voice Newspaper
- The Waterfront Regeneration Trust
- The Waterfront School
- The Workplace Safety and Insurance Board of Ontario
- Thomas Balsley Associates
- Thomas S. Mokrzycki & Associates Ltd.
- Thomson-Rogers
- Tokata LTD
- Toronto & District Cricket Ass'n
- Toronto & Region Conservation Authority (TRCA)
- Toronto Artscape
- Toronto Association of Architects
- Toronto Atmospheric Fund - Clean Air Partnership
- Toronto Baseball Ass'n
- Toronto Bay Initiative
- Toronto Beaches Lacrosse Club
- Toronto Bicycling Network
- Toronto Board of Trade
- Toronto Brigantine
- Toronto Building Exchange
- Toronto Central Sports & Social Club
- Toronto Chinese Business Assoc.
- Toronto Community Housing Corporation
- Toronto Community Ventures
- Toronto Cycling Committee
- Toronto District Heating Corp
- Toronto District School Board
- Toronto Drydock
- Toronto Eagles Soccer Club
- Toronto Economic Development Culture and Tourism
- Toronto Environmental Alliance (TEA)
- Toronto Field Hockey Club
- Toronto Field Naturalists
- Toronto Film Studios
- Toronto Harbour Liaison Council
- Toronto Hippo Tours
- Toronto Historical Association
- Toronto Hockey Field Club
- Toronto Hydro
- Toronto Hydro - Hydro substation
- Toronto Hydro Electric System
- Toronto Industry Network
- Toronto International Dragon Boat Race Festival
- Toronto International Environment Centre
- Toronto Intl DB Festival
- Toronto Island Bird Observatory
- Toronto Island Community Assoc.
- Toronto Island Sailing Club
- Toronto Island Trust
- Toronto Islands
- Toronto Life Magazine
- Toronto Military Hertiage Association (RCMI)
- Toronto Multihull Cruising Club
- Toronto Ornithological Society
- Toronto Parks Foundation & Urban Strategies
- Toronto Pedestrian Committee
- TOronto Police
- Toronto Police Services Marine Unit
- Toronto Port Authority
- Toronto Public Health Environmental Health Unit
- Toronto Public Library
- Toronto Real Estate Board
- Toronto Renewable Energy Cooperative/Windshare
- Toronto Rugby Union
- Toronto Services Soccer League
- Toronto Soccer Association
- Toronto Society of Architects
- Toronto Sports council
- Toronto Star
- Toronto Sunday Sun
- Toronto Theatre Alliance
- Toronto Tours
- Toronto Transit Commission
- Toronto Ultimate Club
- Toronto Water Pollution Control
- Toronto Windsurfing Club
- Toronto WR Sailing Club
- Toronto/York Region Labour Council
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- Tourism Toronto
- Town & Country Buffet Restaurants
- Town of Fort Erie
- Trader Media Corporation
- Trailblazer
- TransCanada
- Transport 2000 Scarborough
- Transport Canada
- Transportation Action Now Inc.
- TREB
- Tridel Corporation
- Trillium Ridge Consultants & Associates
- Trout Unlimited
- Twister Contract Administration
- U P Concepts
- ULI--the Urban Land Institute
- UNIS LUMIN
- United Rentals of Canada
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- Universal Workers Union Loc. 183
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- University of Cambridge England
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- University of Michigan Ann Arbor MI USA
- University of Toronto Architecture Landscape and Design
- University Of Trier Germany
- University of Utrecht
- University of Waterloo
- University of Western Ontario
- Urban Affairs Library
- Urban Capital Property Group
- Urban Design Asscoiates
- Urban Development Institute/Ontario
- Urban Intelligence
- Urban Strategies Inc.
- Urbancorp
- URS Canada Inc.
- Van Buskirk
- vancouver park board
- Various
- vern campbell real estate limited
- Vertechs Design
- Viacom Outdoor
- Voice
- Vorecco Ltd.
- Walker Nott Dragicevic Associates
- Wallace Roberts & Todd LLC
- Water Rats Sailing Club
- Waterfront Action
- Waterfront Owners Rights [WOR]
- Waterfront Regeneration Trust
- Waterside Tennis Courts
- Wayne state University University of Michigan-Dearborn
- WDI
- WeirFoulds LLP
- WES Transportation Infrastructure Planning
- West 49 Parallel Design Inc
- West Don Lands Committee
- West Gate Residents' Assoc.
- West Marine
- West Rouge Sports & Recreation Assoc.
- Western Management Consultants of Ontario
- Westwood
- Westwood Sailing Club
- whc
- Wheel Excitement Inc
- Wihington Properties
- Wilson Vukelich LLP
- WND
- WoodGreen Community Services
- Woodgreen United Church
- Woodington Properties
- Works and Emergency Services
- World Journal Daily News
- World Wildlife Fund Canada
- World Youth Centre
- WRCA
- WZMH Architects
- Yankee lady
- Yolles
- Yolles Partnership Inc.
- York University
- youth soccer
- ZAS Architecture
- Zeilder Partnership

Appendix D

Written Comments Received

Western Beaches Watercourse Facility Project Co-ordinated EA - Public Comment Summary

I.D.	Name	Affiliation	Date Received	Medium	Summary of Issues	Response Required	Date of Response	Medium of Response
1.	Robert Blunt	Argonaut Rowing Club	2/25/2005	Email	Budget information, design	Yes	3/4/2005	Email
2.	Public Member		2/25/2005	Email	Potential for wind turbines	Yes	3/2/2005	Email
3.	Public Member		2/25/2005	Email	Class EA process	Yes	3/2/2005	Email
4.	Public Member		2/25/2005	Email	Class EA process	Yes	3/2/2005	Email
5.	Public Member		2/25/2005	Email	Information online	Yes	3/30/2005	Email
6.	Public Member		3/1/2005	Email	Request for information	Yes	3/4/2005	email
7.	Sean Harvey	City of Toronto	3/1/2005	Email	Request for information	Yes	3/4/2005	Phone
8.	Public Member		3/1/2005	Email	Concern for a closed watercourse	No	n/a	n/a
9.	Public Member		3/1/2005	Email	Request for information	Yes	3/4/2005	Email
10.	Public Member		3/2/2005	Email	Potential for wind turbines	Yes	3/4/2005	Email
11.	Public Member		3/2/2005	Email	Class EA process	Yes	3/3/2005	Email
12.	Peter Kozak	Toronto Sailing and Canoe Club	3/2/2005	Email	Request for information	Yes	3/4/2005	Phone
13.	Madeline McDowell	Humber Heritage Committee	3/3/2005	Letter	Breakwater design, effect on the Humber	No	n/a	
14.	Glenn Dobbin	Ontario Place	3/3/2005	Letter/Fax	Effect on Ontario Place	Stakeholder Advisory Committee		
15.	John McNeil	National Yacht Club	3/4/2005	Letter	Breakwater east of Ontario Place	Yes	5/17/2005	K. Pitre responded
16.	Robert Blunt	Argonaut Rowing Club	3/7/2005	Email	PIC #1 format	Yes	3/7/2005	Phone
17.	Alan Gibb	Mississauga Canoe Club	3/7/2005	Email	Length of watercourse	Yes	3/8/2005	Email
18.	Susan Kitchen	Argonaut Rowing Club	3/7/2005	Email	EA scope, format of PIC #1, alternative sites studied	Yes	3/8/2005	Email
19.	Robert Blunt	Argonaut Rowing Club	3/8/2005	Email	Timing for comments	Yes	3/8/2005	Email
20.	Judy Tutty	Canadian Canoe Association	3/9/2005	Letter	Length and location of watercourse, additional stakeholder discussions	Stakeholder Advisory Committee		
21.	Don Campbell	Great Lakes Alberg Association	3/9/2005	Email	Staging and construction scheduling	No	n/a	n/a
22.	Public Member		3/10/2005	Email	Potential for wind turbines	No	n/a	n/a
23.	Chris Rudge	Canadian Olympic Committee	3/10/2005	Letter	Length of watercourse	No	n/a	n/a
24.	Judy Sutcliffe	Argonaut Rowing Club	3/10/2005	Email	Safety, process, location, construction staging, purpose of facility, land-based facilities	Stakeholder Advisory Committee		
25.	Brian Knoll	Council of Commodores	3/10/2005	Email	Staging and construction scheduling	No	n/a	n/a
26.	Greg Allen	Sustainable Edge Ltd.	3/10/2005	Letter	Stormwater management, wind power and pathway along breakwater	No	n/a	n/a
27.	Konrad Doerrbecker	Dragon Boat World	3/10/2005	Email	In support of project	No	n/a	n/a
28.	Public Member		3/10/2005	Email	Request for information	Yes	3/17/2005	Email, letter
29.	John Carmichael	Rowing Canada Aviron	3/10/2005	Letter	Use of watercourse, safety, EA process	Stakeholder Advisory Committee		
30.	Don McLeod	Boulevard Club	3/11/2005	Email	EA process, remediation of breakwater in poor repair	Stakeholder Advisory Committee		
31.	Public Member		3/11/2005	Email	Request for information	Yes	3/11/2005	Email

Western Beaches Watercourse Facility Project Co-ordinated EA - Public Comment Summary

I.D.	Name	Affiliation	Date Received	Medium	Summary of Issues	Response Required	Date of Response	Medium of Response
32.	Fenwick Bonnell	Argonaut Rowing Club	3/11/2005	Email	Construction staging and scheduling	Stakeholder Advisory Committee		
33.	Dennis Winters	Tales of the Earth	3/11/2005	Letter	Breakwater design	No	n/a	n/a
34.	Robert Blunt	Argonaut Rowing Club	3/15/2005	Letter	Request for information	Stakeholder Advisory Committee		
35.	David Allsebrook	National Yacht Club	3/15/2005	Fax	Construction staging and scheduling	Stakeholder Advisory Committee		
36.	Public Member		3/15/2005	Email	EA process, concern for fish habitat, length of watercourse	Yes	4/5/2005	Email
37.	Blake Hara	Toronto IDBF	3/16/2005	Email	Length of watercourse and breakwater design	Yes	3/21/2005	Email
38.	Public Member		3/17/2005	Email	Request for information	Yes	3/21/2005	Email
39.	George Barkwell	Row Ontario	3/22/2005	Letter	Length of watercourse and safety	Stakeholder Advisory Committee		
40.	Public Member		3/29/2005	Email	Request to be on mailing list	No	n/a	n/a
41.	Robert Blunt	Argonaut Rowing Club	3/31/2005	Letter	Location, post-event use of facility, safety, additional repairs to breakwater in area, fish habitat, construction staging and scheduling	Stakeholder Advisory Committee		
42.	Bryan Watson	Balmy Beach Canoe Club	4/4/2005	Email	EA process, length of watercourse,	Stakeholder Advisory Committee		
43.	Margaret Herd	Balmy Beach Canoe Club	4/4/2005	Email	Location and length of watercourse	Stakeholder Advisory Committee		
44.	Public Member		4/6/2005	Email	EA process	Yes	4/6/2005	Email
45.	Public Member		4/6/2005	Email	Length of watercourse	No	n/a	n/a
46.	Dennis Winters	Tales of the Earth	4/6/2005	Email	Breakwater design			
47.	Harry Renaud	Boulevard Club	4/6/2005	Email	Height of breakwater, winter use	Stakeholder Advisory Committee		
48.	Robert Blunt	Argonaut Rowing Club	4/8/2005	Email	Breakwater design	Stakeholder Advisory Committee		
49.	Public Member		4/12/2005	Phone	Request for information	Yes	4/12/2005	Letter
50.	George Barkwell	Row Ontario	4/21/2005	Letter	Breakwater design and post-event management	Stakeholder Advisory Committee		
51.	John Carmichael	Rowing Canada Aviron	4/21/2005	Letter	Breakwater design and post-event management	Stakeholder Advisory Committee		
52.	Robert Blunt	Argonaut Rowing Club	4/22/2005	Letter	Breakwater design, construction staging and scheduling, location, safety, ownership, management, post-event use of facility, additional repairs to breakwater in area, Ontario Place, breakwater design, fish habitat	Stakeholder Advisory Committee		
53.	Peter Kozak	Toronto Sailing and Canoe Club	4/22/2005	Letter	Location, use of removed breakwater, mooring, breakwater design	Stakeholder Advisory Committee		
54.	Public Member		received prior to 04/22/05	Letter	TWRC's Sustainability Framework			

1

[redacted]
>

02/25/05 04:59 PM

To "<ngaffney@trca.on.ca>, "Kristin Jenkins" <kjenkins@towaterfront.ca>
cc
bcc
Subject EA Process

Nancy/Kristin

Now that this is "public" with the EA announcement, can I get budget numbers and details for all of the options considered. I have been told by our environmental consultant and the lawyers here that those numbers and details should be public.

We need to be in position to make formal comments on the details of the EA and the options to be considered.

Thank you.

1

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/04/05 04:33 PM

To [redacted]
cc "Kristin Jenkins" <kjenkins@towaterfront.ca>, kpitre@sympatico.ca
bcc ngaffney@trca.on.ca
Subject Re: EA Process

Dear [redacted]

The existing budget numbers and design details are available within the Feasibility Study provided to you. Current work is underway to refine the numbers and detailed design; updated information will be provided at the public forum on March 10, 2005. This information should assist you in the preparation of your formal comments. Please contact the undersigned if you have any further questions.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

[redacted]
>

02/25/05 04:59 PM

To <ngaffney@trca.on.ca>, "Kristin Jenkins" <kjenkins@towaterfront.ca>
cc
Subject EA Process

Nancy/Kristin

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We need to be in position to make formal comments on the details of the EA and the options to be considered.

Thank you.

1

[redacted]
>

03/07/05 10:56 AM

To "Nancy Gaffney" <NGaffney@trca.on.ca>
cc
bcc
Subject RE: EA Process

thanks Nancy.

From: Alex Phillips [mailto:APhillips@trca.on.ca] **On Behalf Of** Nancy Gaffney
Sent: March 4, 2005 4:33 PM
To: [redacted]
Cc: Kristin Jenkins; kpitre@sympatico.ca
Subject: Re: EA Process

Dear [redacted]

The existing budget numbers and design details are available within the Feasibility Study provided to you. Current work is underway to refine the numbers and detailed design; updated information will be provided at the public forum on March 10, 2005. This information should assist you in the preparation of your formal comments. Please contact the undersigned if you have any further questions.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

02/25/05 04:59 PM

To <ngaffney@trca.on.ca>, "Kristin Jenkins" <kjenkins@towaterfront.ca>
cc
Subject EA Process

Nancy/Kristin

Now that this is "public" with the EA announcement, can I get budget numbers and details for all of the

1

[redacted]
>
03/07/05 11:02 AM

To "Nancy Gaffney" <NGaffney@trca.on.ca>
cc
bcc
Subject RE: EA Process

Nancy can you confirm the format for Thursday? Are you anticipating delegations or is it an open house format?

From: Alex Phillips [mailto:APhillips@trca.on.ca] **On Behalf Of** Nancy Gaffney
Sent: March 4, 2005 4:33 PM
To: [redacted]
Cc: Kristin Jenkins; kpitre@sympatico.ca
Subject: Re: EA Process

Dear [redacted]

The existing budget numbers and design details are available within the Feasibility Study provided to you. Current work is underway to refine the numbers and detailed design; updated information will be provided at the public forum on March 10, 2005. This information should assist you in the preparation of your formal comments. Please contact the undersigned if you have any further questions.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

02/25/05 04:59 PM

To <ngaffney@trca.on.ca>, "Kristin Jenkins" <kjenkins@towaterfront.ca>
cc
Subject EA Process

Nancy/Kristin

1

[redacted]
>

03/08/05 12:56 PM

To "Nancy Gaffney" <NGaffney@trca.on.ca>
cc
bcc
Subject March 10, March 31st, April 5th?

History: This message has been replied to.

Nancy, we obviously have the EA meeting on the 10th. I assume that I am correct that you need comments back by March 31st on what is presented on the 10th. Assuming our comments are valid and can be incorporated, do I understand that there will be a follow up EA meeting/presentation request for comments to address the comments from March 31st? For some reason I thought some date in April was important but, I cant recall why.

thanks.

1

Nancy Gaffney/MTRCA
03/08/05 01:10 PM

To [redacted]
cc
bcc kpitre@sympatico.ca
Subject Re: March 10, March 31st, April 5th?

Hi[redacted]

You are right about the dates, March 10 - PIC, March 31 - comments due and April 5th was tentatively discussed for our next Public Information Centre. It may be too soon if things go off the rails on Thursday night. I was a little surprised to read your comments in the Star on behalf of the Argonaut Rowing Club it doesn't sound like the Robert Blunt I talked to yesterday. See you Thursday!

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

2

[redacted]
>
02/25/05 05:35 PM

To ngaffney@trca.on.ca
cc
bcc
Subject Western Toronto Beaches Breakwater

Hello Nancy

I am curious to know if the TWRC or the TRCA have considered using the breakwater as an island for wind turbine development?

I am interested in coming to the release of the EA on March 7, but just can't wait to know about potential for wind development!

Thank you

[redacted]

--
Internal Virus Database is out-of-date.
Checked by AVG Anti-Virus.
Version: 7.0.300 / Virus Database: 266.1.0 - Release Date: 18/02/2005

2

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/02/05 03:12 PM

To [redacted]
cc
bcc
Subject Re: Western Toronto Beaches Breakwater

Dear [redacted]

Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. The provision of a wind turbine development would require additional studies beyond the scope of the Municipal Class EA process which applies to municipal infrastructure projects including roads, water and wastewater projects only. Timing is very tight to facilitate a new breakwater by August 2006; perhaps this is a feature that could be examined in a subsequent phase of the project. If you would like, please put your comments forward to the undersigned for further consideration.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
tel: (416) 661 6600 ext. 5313
fax: (416) 661 6898
email: ngaffney@trca.on.ca

[redacted]

[redacted]
>

02/25/05 05:35 PM

To ngaffney@trca.on.ca
cc
Subject Western Toronto Beaches Breakwater

Hello Nancy

I am curious to know if the TWRC or the TRCA have considered using the breakwater as an island for wind turbine development?

I am interested in coming to the release of the EA on March 7, but just can't wait to know about potential for wind development!

Thank you

[redacted]

--

2

[redacted]
>

03/02/05 07:01 PM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
bcc
Subject Re: Western Toronto Beaches Breakwater

History: This message has been replied to.

Nancy

Thank you for your reply.

If the breakwater were constructed to facilitate future hypothetical wind turbine development, there would be no additional EA requirements right?

So my question is now are there plans to construct the breakwater to accommodate future development?

When the wind turbine decision is ready to be made, all that is required is likely a "screening" which is a fairly simple undertaking.

[redacted]

At 03:12 PM 02/03/2005, Nancy Gaffney wrote:

>Dear [redacted]
>
>Thank you for your interest in the Municipal Class EA process for the
>construction of a new breakwater in the Western Beaches. The provision of
>a wind turbine development would require additional studies beyond the
>scope of the Municipal Class EA process which applies to municipal
>infrastructure projects including roads, water and wastewater projects
>only. Timing is very tight to facilitate a new breakwater by August 2006;
>perhaps this is a feature that could be examined in a subsequent phase of
>the project. If you would like, please put your comments forward to the
>undersigned for further consideration.
>
>Nancy Gaffney, B.Sc.
>Waterfront Specialist
>Watershed Management Division
>tel: (416) 661 6600 ext. 5313
>fax: (416) 661 6898
>email: ngaffney@trca.on.ca
>
>
>
>
>
>
>[redacted]
>
>02/25/05 05:35 PM
>To
>ngaffney@trca.on.ca
>cc
>Subject

2

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/04/05 03:04 PM

To [redacted]
cc
bcc Nancy Gaffney/MTRCA@MTRCA
Subject Re: Western Toronto Beaches Breakwater

Dear [redacted]

Thank you for your email sent on March 2, 2005. In regard to your inquiry, the primary purpose of the Municipal Class EA is to construct a breakwater that will facilitate the implementation of a watercourse by 2006. We are not considering ancillary facilities, such as wind turbine development, at this time. However, we are not precluding any additional developments for future phases of this undertaking.

Further EA requirements would be required as the Municipal Class EA applies to municipal infrastructure projects including roads, water and wastewater projects only. For further information about additional EA requirements, please see the Ministry of the Environment's "Guide to Environmental Assessments for Electricity Projects" available online at:
www.ene.gov.on.ca/envision/gp/4021e.pdf

If you have further questions, please do not hesitate to contact the undersigned.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

[redacted]
>

03/02/05 07:01 PM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
Subject Re: Western Toronto Beaches Breakwater

Nancy

Thank you for your reply.

If the breakwater were constructed to facilitate future hypothetical wind turbine development, there would be no additional EA requirements right?

So my question is now are there plans to construct the breakwater to accommodate future development?

When the wind turbine decision is ready to be made, all that is required is likely a "screening" which is a fairly simple undertaking.

[redacted]

2

[redacted]
>
03/10/05 09:47 AM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
bcc
Subject Re: Western Toronto Beaches Breakwater

I am very aware of the Ministry of the Environment's "Guide to Environmental Assessments for Electricity Projects". I am also aware that early on the Toronto Waterfront Revitalization Corporation was planning on developing a process whereby waterfront projects were going to see their EA approvals processes streamlined. I have given up hope that this will happen based on your correspondence.

I am also aware that the TWRC said that they would be developing a Sustainable Integrated Energy Strategy (SIES), that would be able to identify the opportunities for clean energy sources (such as turbines on the breakwater). I have given up hope that the SIES will ever happen, despite the fact that it's a really good idea and supported by City Works and the FCM (
http://kn.fcm.ca/ev.php?URL_ID=4436&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1101312458
)

You said in your email of March 4: " we are not precluding any additional developments for future phases of this undertaking." I tend to think that if the dimensions and bearing capacity of the breakwater is not built to accommodate potential future development (which should not change the scope of the municipal EA as it is not considering adding turbines, just considering the possibility that they may be added in the future), the breakwater will not be suitable without the injection of millions more dollars of tax payer money.

So in essence you are precluding additional developments happening in a cost effective way. I would urge you to reconsider the choice to ignore future required clean energy capacity by building the breakwater to accommodate turbine development at some point in the future.

Thanks

[redacted]

At 03:04 PM 04/03/2005, you wrote:

>Dear [redacted]
>
>Thank you for your email sent on March 2, 2005. In regard to your
>inquiry, the primary purpose of the Municipal Class EA is to construct a
>breakwater that will facilitate the implementation of a watercourse by
>2006. We are not considering ancillary facilities, such as wind turbine
>development, at this time. However, we are not precluding any additional

3

[redacted]

02/25/05 09:08 PM

To ngaffney@trca.on.ca
cc
bcc
Subject Toronto Waterfront email of 25 February 2005

History: This message has been replied to.

Nancy Gaffney, B Sc.

An email Class EA Western Beaches sent to me on date at 16:46 provided your name as the source of further information.

Therefore I would be grateful to receive your response to the following information question:

Will you please provide to me directly and explicitly, shortly and personally in writing the definition of the following phrase in the email:

"the requirements for Schedule C projects of the Municipal Class Environmental Assessment?"

Thank you in advance for your attention and assistance

Truly yours,

[redacted]

[redacted]

3

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/02/05 03:15 PM

To [redacted]
cc
bcc
Subject Re: Toronto Waterfront email of 25 February 2005

Dea[redacted]

Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. In regard to your inquiry concerning the requirements of Schedule C projects of the Municipal Class EA, proponents are obliged to undertake consultation with stakeholders. The Municipal Class EA identifies three mandatory points of contact for Schedule C projects including:

1. "Notice of Commencement"
The first mandatory contact informs stakeholders of the nature of the opportunity, the need for the project, the planning and design details formulated to date and the inventories of the natural, social and economic environments. This notice is issued inviting public comment and advertises an upcoming forum to discuss potential impacts and local sensitivities.

2. "Notice of Public Consultation Centre"
The secondary mandatory contact is intended to review alternatives with stakeholders to assist in the selection of the preferred design. This notice is issued inviting stakeholders to a public consultation centre to discuss alternatives.

3. "Notice of Completion of Environmental Study Report"
The third mandatory contact occurs when the Environmental Study Report (ESR) is placed on the public record for a period of at least 30 calendar days. This notice will advise stakeholders of where the ESR may be reviewed and the manner in which public comment is to be received.

Please do not hesitate to contact the undersigned should you have further questions regarding the Municipal Class EA process.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
tel: (416) 661 6600 ext. 5313
fax: (416) 661 6898
email: ngaffney@trca.on.ca

[redacted]

[redacted]

02/25/05 09:08 PM

To ngaffney@trca.on.ca
cc
Subject Toronto Waterfront email of 25 February 2005

3

[redacted]

03/02/05 05:35 PM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
bcc
Subject Re: Toronto Waterfront email of 25 February 2005

History: This message has been replied to.

Dear Ms Gaffney Thank you for your email of 2 March 2005 15:15:36.

I appreciate your effort to discuss the Municipal Class EA process.

I inquired to you 25 February 2005
"Please provide to me directly and explicitly, shortly and personally in writing the definition of **the requirements for Schedule C projects of the Municipal Class Environmental Assessment.**

Thus I requested you to define certain "requirements for Schedule C projects"

Regrettably your response was confined to information on "mandatory points of contact."

Your response did not directly or explicitly address the words "Schedule C projects" in my initiating email to you. and did not directly or explicitly address my words "Municipal Class Environmental Assessment."

Taking into accounrt the time elapsed between my originating email of 25 February 2005 and today's date, I have concluded that your office does not know the definition of **the requirements for Schedule C projects of the Municipal Class Environmental Assessment.**

Therefore I would like to request you promptly escalate this matter in writing to the Toronto Waterfront sender of the 25 February 2005 email which offered your name and email to me.

I

At 03:15 PM 3/2/2005 -0500, Nancy Gaffney wrote:

> Dear [redacted]
>
> Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. In regard to your inquiry concerning the requirements of Schedule C projects of the Municipal Class EA, proponents are obliged to undertake consultation with stakeholders. The Municipal Class EA identifies three mandatory points of contact for Schedule C projects including:

3

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/03/05 04:44 PM

To [redacted]
cc kjenkins@towaterfront.ca, kpitre@sympatico.ca
bcc Nancy Gaffney/MTRCA
Subject Re: Toronto Waterfront email of 25 February 2005

Dear [redacted]

Thank you for your response yesterday afternoon regarding the Municipal Class Environmental Assessment process. I believe I misunderstood your original request for information and sent you a response regarding the public consultation requirements for a Schedule C project of the Municipal Class Environmental Assessment process. Please find the information you requested as outlined in your message dated March 3, 2005.

A Municipal Class Environmental Assessment is a process by which municipal infrastructure projects, involving roads, water and wastewater, will be planned in accordance with the provincial Environmental Assessment Act.

Projects under the Municipal Class Environmental Assessment are classified in terms of schedules. Schedule C projects have the potential for significant environmental effects and generally include the construction of new facilities and major expansions to existing facilities. Schedule C projects are required to follow the full five phase Municipal Class Environmental Assessment process briefly outlined below.

Phase 1 - Problem or Opportunity
1. Identification and description of the problem or opportunity.
2. Discretionary public consultation.

Phase 2 - Alternative Solutions
1. Identification of alternative solutions to the problem.
2. Preparation of a physical description of the area where the project is to occur and a general inventory of the natural, social and economic environments.
3. Identification of the magnitude of the net positive and negative effects of each alternative solution identified in step 1 and the identification of mitigating measures.
4. Evaluation of all reasonable alternative solutions.
5. Consultation with review agencies and the public ("Notice of Commencement").
6. Selection or confirmation of the preferred solution.

Phase 3 - Alternative Design Concepts for the Preferred Solution
1. Identification of alternative design for the preferred solution.
2. Preparation of a detailed inventory of the natural, social and economic environments.
3. Identification of the potential impact of the alternative designs.
4. Evaluation of the alternative designs.
5. Consultation with review agencies and the public ("Notice of Public Consultation Centre").
6. Selection or confirmation of the preferred design.
7. Preliminary finalization of the preferred design.

Phase 4 - Environmental Study Report
1. Completion of the Environmental Study Report (ESR).
2. File the ESR with the Municipal Clerk and place on the public record for at least 30 calendar days for review by the public and review agencies ("Notice of Completion of Environmental Study Report").
3. Provision to Request a Part II Order (dependent upon whether a Part II Order is

requested).

Phase 5 - Implementation
1. Completion of contract drawings and tender documents.
2. Proceed to construction and operation.
3. Monitoring for environmental provisions and commitments.

If you have any further questions regarding specific requirements of the Municipal Class Environmental Assessment process outlined above, please contact the undersigned. Further, if you would like to obtain a copy of Municipal Class Environmental Assessment document, please contact the Ontario Good Roads Association (natasha@ogra.org).

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

[redacted]
03/02/05 05:35 PM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
Subject Re: Toronto Waterfront email of 25 February 2005

Dear Ms Gaffney Thank you for your email of 2 March 2005 15:15:36.

I appreciate your effort to discuss the Municipal Class EA process.

I inquired to you 25 February 2005
"Please provide to me directly and explicitly, shortly and personally in writing the definition of **the requirements for Schedule C projects of the Municipal Class Environmental Assessment.**

Thus I requested you to define certain "requirements for Schedule C projects"

Regrettably your response was confined to information on "mandatory points of contact."

Your response did not directly or explicitly address the words "Schedule C projects" in my initiating email to you. and did not directly or explicitly address my words "Municipal Class Environmental Assessment."

Taking into accounrt the time elapsed between my originating email of 25 February 2005 and

4

[redacted]

02/25/05 05:59 PM

To ngaffney@trca.on.ca
cc
bcc
Subject Re: Class EA Western Beaches Watercourse Facility Public Forum

Thank you for this announcement. I am with the Sunnyside Community Association. We do actually have what we think could be a useful design suggestion. To whom should I address it?

Thank you.

>
>
>
>
>Class EA Western Beaches Watercourse Facility Public Forum
>
>The Toronto Waterfront Revitalization
>Corporation and the City of Toronto as
>co-proponents are preparing an Environmental
>Study Report to undertake the construction of a
>breakwater along the Western Beaches adjacent to
>Ontario Place. This construction will also
>include the removal of an existing breakwall
>currently in poor repair. The Toronto Waterfront
>Revitalization Corporation and the City of
>Toronto are considering methods and means of
>implementing such structure. The new breakwater
>will facilitate the opportunity to host the 2006
>International Dragon Boat Federation World Crew
>Club Championships.
>
>In accordance with the requirements for Schedule
>C projects of the Municipal Class Environmental
>Assessment, the City of Toronto and the Toronto
>Waterfront Revitalization Corporation are making
>preliminary study material and plans available
>for public review on:
>
>Thursday, March 10th, 2005
>6:00 p.m. ñ 7:00 p.m. (EA Open House)
>7:00 p.m. ñ 9:00 p.m. (Presentation and Discussion)
>National Trade Centre, Exhibit Hall A, Salon
>103, 100 Princesí Blvd (Exhibition Place)
>
>Project consultants will be available to discuss
>issues and concerns with members of the public.
>Public input and comments are invited, for
>incorporation into the planning and design of
>this project and will be received until March
>31, 2005. Subject to comments received and the

4

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/02/05 03:06 PM

To [redacted]
cc
bcc
Subject Re: Class EA Western Beaches Watercourse Facility Public Forum

Dear [redacted]

Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. You may address your design suggestions, in writing, to the undersigned.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
tel: (416) 661 6600 ext. 5313
fax: (416) 661 6898
email: ngaffney@trca.on.ca

Dieter Heinrich <heinrich@sympatico.ca>

[redacted]

02/25/05 05:59 PM

To ngaffney@trca.on.ca
cc
Subject Re: Class EA Western Beaches Watercourse Facility Public Forum

Thank you for this announcement. I am with the
Sunnyside Community Association. We do actually
have what we think could be a useful design
suggestion. To whom should I address it?

Thank you.

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>Class EA Western Beaches Watercourse Facility Public Forum
>
>The Toronto Waterfront Revitalization
>Corporation and the City of Toronto as
>co-proponents are preparing an Environmental
>Study Report to undertake the construction of a
>breakwater along the Western Beaches adjacent to
>Ontario Place. This construction will also

5

[redacted]

02/25/05 06:37 PM

To <ngaffney@trca.on.ca>
cc
bcc
Subject breakwater along the Western Beaches adjacent to Ontario Place

Is there a web address where we can look at what is proposed?

Yours truly,

[redacted]

5

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/02/05 03:09 PM

To [redacted]
cc
bcc
Subject Re: breakwater along the Western Beaches adjacent to Ontario Place

Dear [redacted]

Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. Currently preliminary study materials and proposed plans are not available on-line. I encourage you to attend the upcoming public forum on Thursday March 10, 2005 to view these materials. Further, I will alert you when information pertaining to the Class EA process is available on-line. We hope to have it up in one to two weeks.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
tel: (416) 661 6600 ext. 5313
fax: (416) 661 6898
email: ngaffney@trca.on.ca

[redacted]

[redacted]

02/25/05 06:37 PM

To <ngaffney@trca.on.ca>
cc
Subject breakwater along the Western Beaches adjacent to Ontario Place

Is there a web address where we can look at what is proposed?

Yours truly,

[redacted]

5

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/30/2005 04:35 PM

To [redacted]
cc
bcc
Subject Re: breakwater along the Western Beaches adjacent to Ontario Place

Dear [redacted]

Information regarding the Western Beaches Watercourse Facility is now available on line at:
http://www.towaterfront.ca/thirdnavloader.php?first=3e9112548cd89&second=3e9ba9dc309fc&third=419923fb76925

Please check this site frequently as additional information will be posted as it becomes available. Also, please be advised that the next public information is scheduled for Tuesday April 5th from 6:00-9:00PM at the Council Chambers, Metro Hall (2nd Floor).

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

[redacted]

02/25/2005 06:37 PM

To <ngaffney@trca.on.ca>
cc
Subject breakwater along the Western Beaches adjacent to Ontario Place

Is there a web address where we can look at what is proposed?

Yours truly,

[redacted]

6

[redacted]co

03/01/05 10:18 AM

To ngaffney@trca.on.ca
cc
bcc
Subject Western Beaches Info

Hi, Nancy:

You're probably swamped with requests from rowers like me, but I'm afraid I can't make it to the Open House March 10. Bummer.

Is there anything you could send my way that sheds a bit more light on this exciting development?

Thank you very much.

[redacted]

PS...Dragon boats are fairly quick, but last night on Discovery tv (Mythbusters) a men's 8 rowing shell at Stanford actually got a 180 lb person up on water skis from a standing start and pulled him cleanly along (!!!). Not that rowers like to boast or anything....

6

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/04/05 05:14 PM

To [redacted]
cc
bcc Nancy Gaffney/MTRCA@MTRCA
Subject Re: Western Beaches Info

Dear [redacted]
Thank you for your interest in the Western Beaches Watercourse Facility. I have attached a general project description for your review.

WBWF General Project Description.pdf

A Feasibility Study is available however more current information regarding the detailed design of the breakwater will be made available at the public forum on March 10, 2005. This information will be posted online in one to two weeks; I will alert you when this information becomes available online.

It is unfortunate that you will be unable to attend the upcoming public forum, however there will be additional opportunities for public consultation. You will be contacted directly, via email, throughout the Municipal Class EA process regarding these opportunities.

If you have any questions or require further information, please do not hesitate to contact the undersigned.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

[redacted]

03/01/05 10:18 AM

To ngaffney@trca.on.ca
cc
Subject Western Beaches Info

Hi, Nancy:

You're probably swamped with requests from rowers like me, but I'm afraid I can't make it to the Open House March 10. Bummer.

Is there anything you could send my way that sheds a bit more light on this exciting development?

7

[redacted]

03/01/05 11:17 AM

To <ngaffney@trca.on.ca>
cc
bcc
Subject Re: Class EA Western Beaches Watercourse Facility Public Forum

Hello Nancy,

Could you please forward the 'preliminary study information' to my attention for our section's review. If there is any other associated material which may be of benefit in our review can you please also forward (or if it is digitally accessible only please advise).

Many thanks in advance,

[redacted]

PS I understnad that Alex Shevchuk has had some involvement in the project and if the EA materials have already been forwarded to his attention just let me know.

[redacted]

>>> <info@towaterfront.ca> 2/25/2005 5:01:52 PM >>>
The Toronto Waterfront Revitalization Corporation and the City of Toronto as co-proponents are preparing an Environmental Study Report to undertake the construction of a breakwater along the Western Beaches adjacent to Ontario Place. This construction will also include the removal of an existing breakwall currently in poor repair. The Toronto Waterfront Revitalization Corporation and the City of Toronto are considering methods and means of implementing such structure. The new breakwater will facilitate the opportunity to host the 2006 International Dragon Boat Federation World Crew Club Championships.

In accordance with the requirements for Schedule C projects of the Municipal Class Environmental Assessment, the City of Toronto and the Toronto Waterfront Revitalization Corporation are making preliminary study material and plans available for public review on:

Thursday, March 10th, 2005
6:00 p.m. * 7:00 p.m. (EA Open House)
7:00 p.m. * 9:00 p.m. (Presentation and Discussion)
National Trade Centre, Exhibit Hall A, Salon 103, 100 Princes' Blvd

8

[redacted]

03/01/05 11:58 AM

To <ngaffney@trca.on.ca>
cc
bcc
Subject Open course vs. Closed course

Dear Nancy,
I am a Sculler and have been rowing from Ontario Place to the Bloor Street bridge for 22 years. In my 6th year of sculling I was chosen to row for Canada in 1989 and 1991. I think the policy should be to enhance and lengthen the inland waterways of lake Ontario and not impede them.
Definately keep it open. Please.
To me the waterways should be like the Martin Goodman trail - open to pedestrians and cyclists, but not cars. Huge boats do not need to be on the course, neither do jet skiis. Inner harbour party boats used to go up and down the Western beaches behind the breakwall until they ran over a sculler and nearly killed him, now they are banned.
The last thing you probably need at this point in a tight construction period is any opposition the gets "legs". Closing a section of existing waterfront could be seen as taking something away from existing users of the waterway, sort of like closing off 600 metres of the bike path.
Thanks and Cheers,

[redacted]

9

[redacted]

03/01/05 05:19 PM

To ngaffney@trca.on.ca
cc
bcc
Subject TWRC Proposal

To: Ms Nancy Gaffney
Waterfront Specialist
TRCA

From: [redacted]

Re: Class EA Western Beaches Watercourse Facility Public Forum

Dear Ms Gaffney,

Would it be possible to get any brief background information on the proposed plan, so that I might have some degree of orientation prior to the public forum?

If so, please e-mail me at...hockey.heaven@on.aibn.com

Or, if preferred, send the information by Canada Post to me at...1230 15th Sideroad

King

City, Ontario

L7B 1K5

Thank you.

[redacted]

9

[redacted]
Sent by: Alex Phillips
03/04/05 05:18 PM

To [redacted]
cc
bcc Nancy Gaffney/MTRCA@MTRCA
Subject Re: TWRC Proposal

Dear [redacted]
Thank you for your interest in the Western Beaches Watercourse Facility. I have attached a general project description for your review prior to the public forum.

WBWF General Project Description.pdf

If you have any questions or require further information, please do not hesitate to contact the undersigned.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

[redacted]
03/01/05 05:19 PM

To ngaffney@trca.on.ca
cc
Subject TWRC Proposal

To: Ms Nancy Gaffney
Waterfront Specialist
TRCA

From: [redacted]

Re: Class EA Western Beaches Watercourse Facility Public Forum

Dear Ms Gaffney,

Would it be possible to get any brief background information on the proposed plan, so that I might have some degree of orientation prior to the public forum?

If so, please e-mail me at...[redacted]

10

[redacted]
>

03/02/05 07:01 PM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
bcc
Subject Re: Western Toronto Beaches Breakwater

History: This message has been replied to.

Nancy

Thank you for your reply.

If the breakwater were constructed to facilitate future hypothetical wind turbine development, there would be no additional EA requirements right?

So my question is now are there plans to construct the breakwater to accommodate future development?

When the wind turbine decision is ready to be made, all that is required is likely a "screening" which is a fairly simple undertaking.

[redacted]

At 03:12 PM 02/03/2005, Nancy Gaffney wrote:

>Dear [redacted]
>
>Thank you for your interest in the Municipal Class EA process for the
>construction of a new breakwater in the Western Beaches. The provision of
>a wind turbine development would require additional studies beyond the
>scope of the Municipal Class EA process which applies to municipal
>infrastructure projects including roads, water and wastewater projects
>only. Timing is very tight to facilitate a new breakwater by August 2006;
>perhaps this is a feature that could be examined in a subsequent phase of
>the project. If you would like, please put your comments forward to the
>undersigned for further consideration.
>
>Nancy Gaffney, B.Sc.
>Waterfront Specialist
>Watershed Management Division
>tel: (416) 661 6600 ext. 5313
>fax: (416) 661 6898
>email: ngaffney@trca.on.ca
>
>
>
>
>
>
>[redacted]
>
>02/25/05 05:35 PM
>To
>ngaffney@trca.on.ca
>cc
>Subject

10

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/02/05 03:12 PM

To [redacted]
cc
bcc
Subject Re: Western Toronto Beaches Breakwater

Dear [redacted]

Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. The provision of a wind turbine development would require additional studies beyond the scope of the Municipal Class EA process which applies to municipal infrastructure projects including roads, water and wastewater projects only. Timing is very tight to facilitate a new breakwater by August 2006; perhaps this is a feature that could be examined in a subsequent phase of the project. If you would like, please put your comments forward to the undersigned for further consideration.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
tel: (416) 661 6600 ext. 5313
fax: (416) 661 6898
email: ngaffney@trca.on.ca

[redacted]

[redacted]
>

02/25/05 05:35 PM

To ngaffney@trca.on.ca
cc
Subject Western Toronto Beaches Breakwater

Hello Nancy

I am curious to know if the TWRC or the TRCA have considered using the breakwater as an island for wind turbine development?

I am interested in coming to the release of the EA on March 7, but just can't wait to know about potential for wind development!

Thank you

[redacted]

10

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/04/05 03:04 PM

To [redacted]
cc
bcc Nancy Gaffney/MTRCA@MTRCA
Subject Re: Western Toronto Beaches Breakwater

Dear [redacted]

Thank you for your email sent on March 2, 2005. In regard to your inquiry, the primary purpose of the Municipal Class EA is to construct a breakwater that will facilitate the implementation of a watercourse by 2006. We are not considering ancillary facilities, such as wind turbine development, at this time. However, we are not precluding any additional developments for future phases of this undertaking.

Further EA requirements would be required as the Municipal Class EA applies to municipal infrastructure projects including roads, water and wastewater projects only. For further information about additional EA requirements, please see the Ministry of the Environment's "Guide to Environmental Assessments for Electricity Projects" available online at:
www.ene.gov.on.ca/envision/gp/4021e.pdf

If you have further questions, please do not hesitate to contact the undersigned.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca
[redacted]

[redacted]
>
03/02/05 07:01 PM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
Subject Re: Western Toronto Beaches Breakwater

Nancy

Thank you for your reply.

If the breakwater were constructed to facilitate future hypothetical wind turbine development, there would be no additional EA requirements right?

So my question is now are there plans to construct the breakwater to accommodate future development?

When the wind turbine decision is ready to be made, all that is required is likely a "screening" which is a fairly simple undertaking.

[redacted]

10

[redacted]
>

03/10/05 09:47 AM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
bcc
Subject Re: Western Toronto Beaches Breakwater

I am very aware of the Ministry of the Environment's "Guide to Environmental Assessments for Electricity Projects". I am also aware that early on the Toronto Waterfront Revitalization Corporation was planning on developing a process whereby waterfront projects were going to see their EA approvals processes streamlined. I have given up hope that this will happen based on your correspondence.

I am also aware that the TWRC said that they would be developing a Sustainable Integrated Energy Strategy (SIES), that would be able to identify the opportunities for clean energy sources (such as turbines on the breakwater). I have given up hope that the SIES will ever happen, despite the fact that it's a really good idea and supported by City Works and the FCM (
http://kn.fcm.ca/ev.php?URL_ID=4436&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1101312458
)

You said in your email of March 4: " we are not precluding any additional developments for future phases of this undertaking." I tend to think that if the dimensions and bearing capacity of the breakwater is not built to accommodate potential future development (which should not change the scope of the municipal EA as it is not considering adding turbines, just considering the possibility that they may be added in the future), the breakwater will not be suitable without the injection of millions more dollars of tax payer money.

So in essence you are precluding additional developments happening in a cost effective way. I would urge you to reconsider the choice to ignore future required clean energy capacity by building the breakwater to accommodate turbine development at some point in the future.

Thanks

[redacted]

At 03:04 PM 04/03/2005, you wrote:

>Dear [redacted]
>
>Thank you for your email sent on March 2, 2005. In regard to your
>inquiry, the primary purpose of the Municipal Class EA is to construct a
>breakwater that will facilitate the implementation of a watercourse by
>2006. We are not considering ancillary facilities, such as wind turbine
>development, at this time. However, we are not precluding any additional

11

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/02/05 03:15 PM

To [redacted]
cc
bcc
Subject Re: Toronto Waterfront email of 25 February 2005

Dear [redacted]

Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. In regard to your inquiry concerning the requirements of Schedule C projects of the Municipal Class EA, proponents are obliged to undertake consultation with stakeholders. The Municipal Class EA identifies three mandatory points of contact for Schedule C projects including:

1. "Notice of Commencement"
The first mandatory contact informs stakeholders of the nature of the opportunity, the need for the project, the planning and design details formulated to date and the inventories of the natural, social and economic environments. This notice is issued inviting public comment and advertises an upcoming forum to discuss potential impacts and local sensitivities.

2. "Notice of Public Consultation Centre"
The secondary mandatory contact is intended to review alternatives with stakeholders to assist in the selection of the preferred design. This notice is issued inviting stakeholders to a public consultation centre to discuss alternatives.

3. "Notice of Completion of Environmental Study Report"
The third mandatory contact occurs when the Environmental Study Report (ESR) is placed on the public record for a period of at least 30 calendar days. This notice will advise stakeholders of where the ESR may be reviewed and the manner in which public comment is to be received.

Please do not hesitate to contact the undersigned should you have further questions regarding the Municipal Class EA process.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
tel: (416) 661 6600 ext. 5313
fax: (416) 661 6898
email: ngaffney@trca.on.ca

[redacted]

[redacted]

02/25/05 09:08 PM

To ngaffney@trca.on.ca
cc
Subject Toronto Waterfront email of 25 February 2005

11

Nancy Gaffney/MTRCA
Sent by: •Alex Phillips

03/03/05 04:44 PM

To [redacted]
cc kjenkins@towaterfront.ca, kpitre@sympatico.ca
bcc Nancy Gaffney/MTRCA
Subject Re: Toronto Waterfront email of 25 February 2005

Dear [redacted]

Thank you for your response yesterday afternoon regarding the Municipal Class Environmental Assessment process. I believe I misunderstood your original request for information and sent you a response regarding the public consultation requirements for a Schedule C project of the Municipal Class Environmental Assessment process. Please find the information you requested as outlined in your message dated March 3, 2005.

A Municipal Class Environmental Assessment is a process by which municipal infrastructure projects, involving roads, water and wastewater, will be planned in accordance with the provincial Environmental Assessment Act.

Projects under the Municipal Class Environmental Assessment are classified in terms of schedules. Schedule C projects have the potential for significant environmental effects and generally include the construction of new facilities and major expansions to existing facilities. Schedule C projects are required to follow the full five phase Municipal Class Environmental Assessment process briefly outlined below.

Phase 1 - Problem or Opportunity
1. Identification and description of the problem or opportunity.
2. Discretionary public consultation.

Phase 2 - Alternative Solutions
1. Identification of alternative solutions to the problem.
2. Preparation of a physical description of the area where the project is to occur and a general inventory of the natural, social and economic environments.
3. Identification of the magnitude of the net positive and negative effects of each alternative solution identified in step 1 and the identification of mitigating measures.
4. Evaluation of all reasonable alternative solutions.
5. Consultation with review agencies and the public ("Notice of Commencement").
6. Selection or confirmation of the preferred solution.

Phase 3 - Alternative Design Concepts for the Preferred Solution
1. Identification of alternative design for the preferred solution.
2. Preparation of a detailed inventory of the natural, social and economic environments.
3. Identification of the potential impact of the alternative designs.
4. Evaluation of the alternative designs.
5. Consultation with review agencies and the public ("Notice of Public Consultation Centre").
6. Selection or confirmation of the preferred design.
7. Preliminary finalization of the preferred design.

Phase 4 - Environmental Study Report
1. Completion of the Environmental Study Report (ESR).
2. File the ESR with the Municipal Clerk and place on the public record for at least 30 calendar days for review by the public and review agencies ("Notice of Completion of Environmental Study Report").
3. Provision to Request a Part II Order (dependent upon whether a Part II Order is

requested).

Phase 5 - Implementation
1. Completion of contract drawings and tender documents.
2. Proceed to construction and operation.
3. Monitoring for environmental provisions and commitments.

If you have any further questions regarding specific requirements of the Municipal Class Environmental Assessment process outlined above, please contact the undersigned. Further, if you would like to obtain a copy of Municipal Class Environmental Assessment document, please contact the Ontario Good Roads Association (natasha@ogra.org).

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

[redacted]

03/02/05 05:35 PM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
Subject Re: Toronto Waterfront email of 25 February 2005

Dear Ms Gaffney Thank you for your email of 2 March 2005 15:15:36.

I appreciate your effort to discuss the Municipal Class EA process.

I inquired to you 25 February 2005
"Please provide to me directly and explicitly, shortly and personally in writing the definition of **the requirements for Schedule C projects of the Municipal Class Environmental Assessment.**

Thus I requested you to define certain "requirements for Schedule C projects"

Regrettably your response was confined to information on "mandatory points of contact."

Your response did not directly or explicitly address the words "Schedule C projects" in my initiating email to you. and did not directly or explicitly address my words "Municipal Class Environmental Assessment."

Taking into accounrt the time elapsed between my originating email of 25 February 2005 and

11

[redacted]

03/02/05 05:35 PM

To Nancy Gaffney <NGaffney@trca.on.ca>
cc
bcc
Subject Re: Toronto Waterfront email of 25 February 2005

History: This message has been replied to.

Dear Ms Gaffney Thank you for your email of 2 March 2005 15:15:36.

I appreciate your effort to discuss the Municipal Class EA process.

I inquired to you 25 February 2005
"Please provide to me directly and explicitly, shortly and personally in writing the definition of **the requirements for Schedule C projects of the Municipal Class Environmental Assessment.**

Thus I requested you to define certain "requirements for Schedule C projects"

Regrettably your response was confined to information on "mandatory points of contact."

Your response did not directly or explicitly address the words "Schedule C projects" in my initiating email to you. and did not directly or explicitly address my words "Municipal Class Environmental Assessment."

Taking into accounrt the time elapsed between my originating email of 25 February 2005 and today's date, I have concluded that your office does not know the definition of **the requirements for Schedule C projects of the Municipal Class Environmental Assessment.**

Therefore I would like to request you promptly escalate this matter in writing to the Toronto Waterfront sender of the 25 February 2005 email which offered your name and email to me.

I

At 03:15 PM 3/2/2005 -0500, Nancy Gaffney wrote:

> Dear [redacted]
>
> Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. In regard to your inquiry concerning the requirements of Schedule C projects of the Municipal Class EA, proponents are obliged to undertake consultation with stakeholders. The Municipal Class EA identifies three mandatory points of contact for Schedule C projects including:

11

[redacted]

02/25/05 09:08 PM

To ngaffney@trca.on.ca
cc
bcc
Subject Toronto Waterfront email of 25 February 2005

History: This message has been replied to.

Nancy Gaffney, B Sc.

An email Class EA Western Beaches sent to me on date at 16:46 provided your name as the source of further information.

Therefore I would be grateful to receive your response to the following information question:

Will you please provide to me directly and explicitly, shortly and personally in writing the definition of the following phrase in the email:

"the requirements for Schedule C projects of the Municipal Class Environmental Assessment?"

Thank you in advance for your attention and assistance

Truly yours,

[redacted]

12

[redacted]

03/02/05 04:36 PM

Please respond to [redacted]

To <ngaffney@trca.on.ca>

cc

bcc

Subject TWRC consultants report on Breakwall etc

Hi Nancy,

As the Commodore of the Toronto Sailing & Canoe Club (located at 1391 Lakeshore) I am quite interested in any breakwall developments west of Ontario Place. At the TWRC meetings it has been suggested that we can get access to the consultants report done for the development of the Dragon Boat Course and revised breakwall configuration.

I would like a copy of the report. The communication meetings while interesting don't allow sufficient time or access to do a reasonable review of the issues. Is the report published in electronic form on the web somewhere? Failing that I can accept a mailed report at

Toronto Sailing & Canoe Club
1391 Lakeshore Blvd West
Toronto, Ontario
M6K 3C1

Alternatively, I can pick it up. You can call me at home at 905-891-2596 or cell 416-948-2403.

Thanks.

[redacted]

called 03/04/05 → understands it is only option 2A, would like further background on all options examined in the feasibility study

[redacted]

13

March 3rd, 2004

Members of the Executive Committee
Toronto and Region Conservation Authority
5 Shoreham Drive
Downsview, Ontario
M3N 1S4

Re; Western Beaches Watercourse Facility

Dear Chairman O'Brien and Committee Members:

The moving of the Breakwater Wall presents an opportunity to remediate water quality in the Western Beaches in conjunction with both the Wet Weather Flow Master Plan and The Great Lakes Remedial Action Program.

The incorporation of UV purification units into the replacement Wall would greatly enhance water cleanliness for both the human population of boaters and swimmers and for the indigenous aquatic population. It would contribute to the R.A.P. and eliminate any validation for the City's engineers' proposed Deflector Arm at the Mouth of the Humber, to which, I am sure you are aware, the Humber Heritage Committee is vehemently opposed.

It is essential that the Humber end of the Western Beaches Facility not interfere with the Humber current, or substantially alter the aquatic environment of Humber Bay or the Humber Marshes in any negative manner.

We also trust that there will be no extension of the shoreline of the Lake further into the Lake, for any reason, nor any loss of Heritage features, including Marilyn Bell's landing spot and the French Fort Site.

I am sorry that I am unable to attend today's meeting. The concept of a rowing and canoe facility with Dragon Boats in this area is an exciting return to the regattas past generations enjoyed on this portion of the Waterfront.

Thank you for your kind attention.

Yours sincerely,

Madeleine McDowell
Chair, Humber Heritage Committee

cc. Lois Griffin
Gary Wilkins

14

ontario place

955 Lakeshore Boulevard West
Toronto, Ontario
Canada M6K 3B9

955 boulevard Lakeshore ouest
Toronto, Ontario
Canada M6K 3B9

General Manager's Office

Date: 3/3/2005

Pages: 2, including cover

TO / À	Ms. Nancy Gaffney
Company / Compagnie	Toronto and Region Conservation for the Living City
Fax / Télécopieur	416.661.6898
Subject / Sujet	Letter regarding Dragon Boat

FROM / DE	Glenn Dobbin
Fax / Télécopieur	416.314.9908
Phone / Téléphone	
Email / Courriel	

MESSAGE:

Hello,

Please find attached a letter from Glenn Dobbin regarding comments and concerns with respect to the Dragon Boat course..

Thank you,

Jonathan Daley

ontario place

March 2, 2005

14

Ms. Nancy Gaffney
Waterfront Specialist
Watershed Management Division
Toronto and Region Conservation
5 Shoreham Drive
Toronto, Ontario
M3N 1S4

Dear Ms. Gaffney,

Thank you for inviting Ontario Place to participate at the watercourse stakeholder meeting on February 21. I am writing to respond to Alex Phillips request for all comments and concerns regarding the new dragon boat course. As mentioned at the meeting on the 21st, Ontario Place has a number of concerns. These include:

1. The proposed course may cross over onto Ontario Place water lots. This must be approved by the Ontario Place Board of Directors and by the Province of Ontario.

2. Access to the Ontario Place North Marina must be maintained.

3. Ontario Place hosts an annual dragon boat event. In 2005, this event will take place on the weekend of September 10/11. Construction of the new course must not interfere with the Ontario Place event.

4. Ontario Place shoreline must continue to be protected.

5. Ontario Place and the CNE use Marilyn Bell for parking in August. Parking during the month of August is very limited and this overflow parking at Marilyn Bell must remain available during the construction period.

Thanks again for asking for our input on this project. I would be happy to meet with you at your convenience to elaborate on the potential issues listed above.

Best regards,

Glenn Dobbin
General Manager

Cc: Bill Allen, Deputy Minister, Ministry of Tourism and Recreation
David Crombie, Chairman, Ontario Place Board of Directors

ontario place

March 2, 2005

14

Ms. Nancy Gaffney
Waterfront Specialist
Watershed Management Division
Toronto and Region Conservation
5 Shoreham Drive
Toronto, Ontario
M3N 1S4

rcv'd 03/10/05
WMD

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Best regards,

Glenn Dobbin
General Manager

Cc: Bill Allen, Deputy Minister, Ministry of Tourism and Recreation
David Crombie, Chairman, Ontario Place Board of Directors

15

JOHN S. McNEIL
Barrister & Solicitor

Suite 702
130 Adelaide Street West
TORONTO, ONTARIO
M5H 3P5

TELEPHONE: (416) 368-4511
Writer's Direct Line: 360-2878
Assistant's Direct Line: 360-2879

FACSIMILE: (416) 368-4532
E-MAIL: john@jsmcneil.ca

rcv'd 03/10/05
WMD

March 4, 2005

Ms. Nancy Gaffney
Toronto & Region Conversation
5 Shoreham Drive
Downsview, Ontario
M3K 1S4

Dear Ms. Gaffney:

Re: Class EA Western Beaches Watercourse Facility

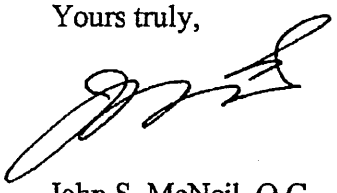
I am a member of the Planning Committee of the National Yacht Club and am on the mailing list of the Toronto Waterfront Revitalization Corporation as the Club's contact person with that entity.

In that connection, I received notice of the public forum scheduled for March 10, 2005 having to do with the repair or replacement of the breakwater west of Ontario Place.

The breakwater to the east of Ontario Place is in similar condition, and it is in the Club's interest to try and accomplish its repair. The Club simultaneously thought that the City might have some interest in expanding the walkway along the Western Gap through to Ontario Place as part of the repair process, so long as some accommodation could be made for the exist of vessels from the basin which services the National Yacht Club, the Alexandria Yacht Club, and HMCS York.

Could you give me the name of a contact person that you might be dealing with at your end, with the Toronto Waterfront Revitalization Corporation, with whom I might further these kinds of discussions?

Yours truly,



John S. McNeil, Q.C.

JSM/sn

16

[redacted]
>

03/07/05 11:02 AM

To "Nancy Gaffney" <NGaffney@trca.on.ca>
cc
bcc
Subject RE: EA Process

Nancy can you confirm the format for Thursday? Are you anticipating delegations or is it an open house format?

From: Alex Phillips [mailto:APhillips@trca.on.ca] **On Behalf Of** Nancy Gaffney
Sent: March 4, 2005 4:33 PM
To: [redacted]
Cc: Kristin Jenkins; kpitre@sympatico.ca
Subject: Re: EA Process

Dear [redacted]

The existing budget numbers and design details are available within the Feasibility Study provided to you. Current work is underway to refine the numbers and detailed design; updated information will be provided at the public forum on March 10, 2005. This information should assist you in the preparation of your formal comments. Please contact the undersigned if you have any further questions.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

02/25/05 04:59 PM

To <ngaffney@trca.on.ca>, "Kristin Jenkins" <kjenkins@towaterfront.ca>
cc
Subject EA Process

Nancy/Kristin

16

[redacted]
>

03/08/05 12:56 PM

To "Nancy Gaffney" <NGaffney@trca.on.ca>
cc
bcc
Subject March 10, March 31st, April 5th?

History: This message has been replied to.

Nancy, we obviously have the EA meeting on the 10th. I assume that I am correct that you need comments back by March 31st on what is presented on the 10th. Assuming our comments are valid and can be incorporated, do I understand that there will be a follow up EA meeting/presentation request for comments to address the comments from March 31st? For some reason I thought some date in April was important but, I cant recall why.

thanks.

16

Nancy Gaffney/MTRCA
03/08/05 01:10 PM

To [redacted]
cc
bcc kpitre@sympatico.ca
Subject Re: March 10, March 31st, April 5th?

Hi [redacted]

You are right about the dates, March 10 - PIC, March 31 - comments due and April 5th was tentatively discussed for our next Public Information Centre. It may be too soon if things go off the rails on Thursday night. I was a little surprised to read your comments in the Star on behalf of the Argonaut Rowing Club it doesn't sound like the [redacted] I talked to yesterday. See you Thursday!

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

16

[redacted]

03/15/05 12:09 PM

To ngaffney@trca.on.ca
cc info@towaterfront.ca
bcc
Subject Dragon Boat Meeting

Nancy Gaffney,

I attended the meeting relating to the Dragon Boat course planned for the Toronto waterfront last Wednesday night. I am writing to express my total displeasure with the presentation and discussion that was convened at the National Trade Centre.

Though a Toronto resident, I found the venue very difficult to locate due to the poor signage used. The National Trade Centre is a large and beautiful building and was an ideal and centrally located venue. However, once inside the building, the signs indicating the location of the venue were too small to be legible from a distance. I spent a considerable amount of time walking back and forth within the building.

The second point I would like to make is the fact that there were no handout materials available. Having attended and participated at a number of other City of Toronto public consultation events in the past, I was under the impression that handout materials are a standard practice. Unfortunately, the only materials available were those provided by the Dragon Boat Federation.

I am appalled that neither the TRCA and/or the Toronto Waterfront Revitalization Corporation prepared applicable materials for distribution. Given that this project has the potential to result in some serious environmental impacts (specifically to sensitive fisheries resources), I would have preferred to take some materials home to review and digest prior to writing this letter.

This project is costing Toronto tax payers a great of money, $23 million, to build was has been billed as a "world class facility on the Toronto waterfront". Some of this money would have been well spent to provide those in attendance with suitable handout materials. Why did this not occur?

My next point ties in with the above. The display materials were too small and as a result were not clearly legible. Though my eye sight is quite good, I had great difficulty reading and reviewing the boards containing the display materials. Once again, I feel additional monies should have been spent to convey the materials as clearly as possible.

It is my understanding that this project will result in some significant impacts to fish habitat. This was not clearly conveyed at the meeting. What is proposed to reduce the likely impacts to fish habitat? Having recently built a dock and crib wall at my cottage, I was forced to obtain a permit from the Ministry of Natural Resources prior to construction. This was not only a long, arduous process, but also required that I carry out construction at specified times of the year to reduce impacts to the fish community. Is the TRCA obligated to obtain a similar permit(s), and how will this affect the timing of construction?

The Notice indicated that this project is following the Municipal Class Environmental Assessment. However, at the meeting, one of the display boards indicated that a federal environmental screening is necessary. Could

17

"Gibb, Alan"
<alan.gibb@cibc.ca>
03/07/05 03:09 PM

To <ngaffney@trca.on.ca>
cc
bcc
Subject WESTERN BEACHES WATERCOURSE FACILITY

Hello Nancy,

My name is Alan Gibb and I am the Director of Coaching at the Mississauga Canoe Club. I have read in the paper that a complete 1000m course will not be part of the initial construction phase of the Western Beaches Watercourse facility. Is this truly the case? The racing distances for the sport of flatwater canoe/kayak are 500m and 1000m respectively. With a world class 1000m course in place our sport will be able to utilize it locally as well as attract National and International events. I am just curious as to what the complete plan is. Thank-you for your time.

Sincerely,

Alan R Gibb, MBA, CMA
Business Analyst
CIBC WOOD GUNDY
416-594-8590
alan.gibb@cibc.ca

17

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/08/05 04:28 PM

To "Gibb, Alan" <alan.gibb@cibc.ca>
cc
bcc
Subject Re: WESTERN BEACHES WATERCOURSE FACILITY

Dear Mr. Gibb:

Thank you for your inquiry regarding the Western Beaches Watercourse Facility. The current proposal, funding approved by three levels of government, is for a 650 metre course. This course will be completed for August 2006, in time to host the International Dragon Boat Federation World Crew Club Championships. A course any longer in length would not be feasible within the tight timelines for approvals and construction. Additionally, the cost of a longer course is currently beyond the available funding envelope. We are not precluding the possibility of an expanded course to accommodate other flatwater rowing events; the opportunity to expand will be examined in future phases of this project.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

"Gibb, Alan" <alan.gibb@cibc.ca>

"Gibb, Alan"
<alan.gibb@cibc.ca>

03/07/05 03:09 PM

To <ngaffney@trca.on.ca>
cc
Subject WESTERN BEACHES WATERCOURSE FACILITY

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Sincerely,

Alan R Gibb, MBA, CMA
Business Analyst
CIBC WOOD GUNDY

18

[redacted]ca>

03/07/05 03:44 PM

Please respond to [redacted]

To <ngaffney@trca.on.ca>

cc

bcc

Subject March 10 Watercourse

Hello Nancy:

I read with interest the notice in the paper of meeting for March 10 on the Watercourse facility going in in the Western Beaches.

I have a couple of questions. I would like to sign up to make a deputation at this meeting. I would like to know how long you have alloted for individual deputations and who the panel will be attending this session.

Also, I wondered if there is some information you could send me on the scope and definition of the type of Environmental study you will be undertaking. For example will you be studying the impact on community use, recreation use, social impacts, etc. or just focussing on water quality and fish habitats? I am also concerned about the land use in the adjacent shoreline and maintaining that citizens will have access. How far inland does the environmental study go? And lastly, I was wondering if in the presentation there will be information given to the public about the alternative Toronto potential sites studied, and why this site and location was picked over other locations in Toronto.

Let me know what information you need from me to sign up to provide a deputation.

Thank-you.

[redacted]

18

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/08/05 04:37 PM

To [redacted]
cc
bcc
Subject Re: March 10 Watercourse

Dear [redacted]
Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. We will not be accepting deputations at the meeting on March 10th, 2005; there is an hour allotted for discussion including a question and answer period. You may participate as part of the question and answer period and please be advised that written submissions are welcome until March 31, 2005. The panel at this meeting will include representatives from Toronto Waterfront Revitalization Corporation, City of Toronto, Toronto and Region Conservation and engaged consultants.

I have attached a project description for your reference, outlining the environmental assessment process necessary for this project. In addition to the Municipal Class EA, environmental assessments in accordance with the Canadian Environmental Assessment Act (CEAA) and Ministry of Natural Resources' Class EA for Stewardship and Facility Development Projects will be undertaken. The Municipal Class EA focuses solely on the breakwater, however the other EA processes will address the social impacts you highlighted in your email. The scope of the project (geographic boundaries) will be determined through the CEAA process. In regard to land use in the adjacent shoreline, we plan to maintain and enhance public access at Marilyn Bell Park.

In regard to alternate sites for the watercourse, the City of Toronto and Dragon Boat Canada placed a bid to host the International Dragon Boat Federation World Club Crew Championships in August 2006 at the proposed site. This bid was accepted and the proposed location was set.

If you have further questions, please do not hesitate to contact the undersigned. I will be at the public forum tomorrow, please come introduce yourself and we can speak about your concerns further.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

[redacted]

[redacted]

03/07/05 03:44 PM
Please respond to [redacted]

To <ngaffney@trca.on.ca>
cc
Subject March 10 Watercourse

18

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/08/05 04:46 PM

To [redacted]
cc
bcc
Subject Re: March 10 Watercourse

Dear [redacted]

Further to my last email, please find attached the Western Beaches Watercourse Facility project description for your reference.

WBWF General Project Description.pdf

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

19

"Blunt, Robert" <RBlunt@goodmancarr.com>

03/08/05 12:56 PM

To "Nancy Gaffney" <NGaffney@trca.on.ca>
cc
bcc
Subject March 10, March 31st, April 5th?

History: This message has been replied to.

Nancy, we obviously have the EA meeting on the 10th. I assume that I am correct that you need comments back by March 31st on what is presented on the 10th. Assuming our comments are valid and can be incorporated, do I understand that there will be a follow up EA meeting/presentation request for comments to address the comments from March 31st? For some reason I thought some date in April was important but, I cant recall why.

thanks.

19

Nancy Gaffney/MTRCA
03/08/05 01:10 PM

To "Blunt, Robert" <RBlunt@goodmancarr.com>
cc
bcc kpitre@sympatico.ca
Subject Re: March 10, March 31st, April 5th?

Hi Robert

You are right about the dates, March 10 - PIC, March 31 - comments due and April 5th was tentatively discussed for our next Public Information Centre. It may be too soon if things go off the rails on Thursday night. I was a little surprised to read your comments in the Star on behalf of the Argonaut Rowing Club it doesn't sound like the Robert Blunt I talked to yesterday. See you Thursday!

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

Canadian Canoe Association
Western Ontario Division

March 9, 2005
Delivered by hand

Ms Nancy Gaffney, B.Sc., Waterfront Specialist
Toronto and Region Conservation
5 Shoreham Drive
Downsview, Ontario M3K 1S4

Dear Ms. Gaffney:

Re: Toronto Watercourse Facility

We are responding to your invitation for comments about the proposed new breakwater which will facilitate the opportunity to build a watercourse suitable to promote sport tourism in Toronto.

For several years, our sport of canoe kayak has been in support of and actively pursued a world-class regatta course to meet ICF standards in the Toronto area; needless to say we were disappointed that Toronto was not successful in its bid to host the 2008 Olympics.

The proposed site appears to satisfy the need to repair a breakwater and build a suitable dragonboat course for the 2006 Club Crew World Championships. However, to suggest it is a legacy for other water sports is questionable.

Many of us in this sport have concerns about having a watercourse west of Ontario Place where the waterfront is fully exposed to weather coming across a huge expanse of unobstructed lake. Canoe kayak is very sensitive to wind and rough water. Our sport is a flatwater sport, similar to the sport of rowing. Our athletes feel the location is too exposed for consistent flatwater conditions. The site is not conducive to canoe kayak.

In addition, except for a championship regatta in the younger age classes at 500m, our divisional, provincial, and national championships require a 1000m race course (plus 300m for alignment and finish area), and there is doubt we would hold a regatta here for our younger paddlers given the water conditions. The proposed course is not conducive to canoe kayak.

Despite offering to provide input to the feasibility study awarded to MacViro, canoe kayak was not approached nor was it included as one of the stakeholders referred to in the "Dragon Boat

Course Feasibility Study Final Report, September 2004". Indeed, our first appearance was by invitation with short notice to the first stakeholders meeting convened on Monday, February 21, 2005 when this dragonboat course was presented as a *fait accompli*.

To pretend that this site and this course can host serious regattas is a mistake, and to suggest that canoe kayak supports this site is not correct.

Toronto is in a position to build a multi-sport regatta course, and to do it right in the first place. It is recommended that the search continue for a suitable site and to involve all stakeholders in this process. There has been too little time for meaningful concrete discussion amongst the members of our various organizations. We suggest that there be stakeholder meetings on a regular basis with a goal of finding the ideal solution for a world-class regatta course both from a location and from a financial perspective.

Yours very truly,

Judy Tutty, Flag Officer
Suite 801, 1271 Walden Circle, Mississauga Ontario L5J 4R4
judy.tutty@sympatico.ca / 905.823.0584

c
John Campbell
Karen Pitre
John Tracogna
Bob Stuart

21

[redacted]
a>
03/09/05 11:17 AM
Please respond to [redacted]

To ngaffney@trca.on.ca
cc [redacted]
bcc
Subject Waterfront activities

R. R. #3
Embro, Ontario,
N0J 1J0
March 9, 2005

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
Toronto and Region Conservation
5 Shoreham Drive, Toronto, Ontario, M3N 1S4

By e-mail

Dear Nancy;

RE: Toronto Waterfront Activities from September 2005 to August 2006 and the construction of a new breakwall in the western harbour of Toronto.

Mr. Al. Will has sent out a letter to users of the Toronto waterfront and harbour to notify you of plans and usual activities for the above mentioned time period, and I am responding to that request. For the past 40 years, the Great Lakes Alberg Association (GLAA), formerly the Great Lakes Alberg 30 Association, a group of sailors who own boats designed by Carl Alberg, have been regular users of the waters of Humber Bay in conjunction with the help of various yacht clubs within the Toronto waterfront area.

The GLAA has a regular schedule of races that involve 2 weekends a season in the Toronto harbour area. The first is usually on the third weekend in June when we have races on both the Saturday and Sunday and the second is usually the last weekend in August when we have races on only the Saturday. As well, we may have scheduled an Alberg cruise to the Toronto area in which up to 10 boats might be present and knowing that there is disruption within the Toronto harbour area, we will not schedule a cruise to the area other than for the races mentioned within the above time frame. With cruise and race on the same weekend, we might expect no more than 20 boats. However, I would estimate that there will be more than half of those skippers who would be visitors to the Toronto harbour and they would not have the permit that is required from the Toronto Harbour Commissioners for local skippers and boat owners. I can assure you that there will be skippers from Annapolis, Maryland sailing on the June weekend and I know they will not have the THC permits. Communication with visitors will be something that will be important but difficult. I will be happy to be the communication link for the GLAA and will certainly have the GLAA newsletter to inform our members of these plans.

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The GLAA has not scheduled our races for the 2006 season as yet, but I suggest it would be June 17 and 18 and August 26 for that year. For the 2005 season, we have had to accept dates other than our first choice and so we have races from the National Yacht Club this year on June 18 and 19 and again on August 20. These races have normally been held on the NYC hexagonal race course in Humber Bay that includes both the Dufferin and Gibralter buoys. In the past we have had races on the Mimico Cruising Club race course and Aquatic Park Sailing Club race course, often including T2, and the Gibralter and Dufferin buoys. Obviously, we gain access to the NYC from the Wesern Gap and to APSC from the Eastern Gap. While most boats tend to arrive the day before the event, there are several that may plan to arrive a day or more earlier. Dispersion is often on Sunday afternoons. Thus, there might be some week-day traffic associated with these events.

I cannot forsee a problem with rights - of - way for navigation if vessels are moving, but would appreciate consideration for staging or storage areas be given to avoid as much of Humber Bay traffic lanes and race courses as possible, particularly on week-ends. I would suggest that there are accepted lighting and buoyage systems for warning and protecting gas drilling rigs in the Great Lakes (unusual, stationary, floating objects), and Notices to Mariners that accomodate both stationary and moving objects (often used for drilling positions and tugs towing barges) that are accepted navigation practice and these practices ought to be maintained throughout the construction time frame if the construction job were to be undertaken.

Yours sincerely
Donald Campbell
Commodore, Great Lakes Alberg Association,
Telephone 519 475-6033
dk.campbell@sympatico.ca

C.C.
Jan Grodzinski, Secretary , GLAA
Al Will, Executive Director, Ontario Sailing

22

To ngaffney@trca.on.ca
cc
bcc
Subject Western Toronto Beaches Breakwater

Hello Nancy

I am curious to know if the TWRC or the TRCA have considered using the breakwater as an island for wind turbine development?

I am interested in coming to the release of the EA on March 7, but just can't wait to know about potential for wind development!

Thank you

[redacted]

23

Canadian Olympic Committee
Comité olympique canadien

March 10, 2005

John W. Campbell
President and Chief Executive Officer
Toronto Waterfront Revitalization Corporation
207 Queen's Quay West, Suite 822
Toronto, ON
M5J 1A7

Dear Mr. Campbell,

Let me begin by congratulating the Corporation and the City of Toronto for its commitment to the building of a competitive paddling course on Toronto's waterfront. Beyond the ability to attract major events such as the World Dragonboat Racing Championships and to provide greater access to the waterfront for many Torontonians engaged in recreational paddling, it is a recognition that there is a net economic benefit to the community by having athletic facilities that can attract world class events.

While encouraged by this new initiative, I am disappointed that the course isn't long enough to at least accommodate international canoe/kayak competitions. In addition, plans to extend the course in the future to support world class rowing regattas would seem to be a natural extension of the opportunity being embraced in this initial plan. Both canoe/kayak and rowing are sports in which Canada is rapidly becoming a world leader. It is unfortunate that most young athletes from the Toronto region are migrating to other parts of the country in order to develop at the highest levels in these disciplines.

The COC also encourages the City to look beyond the waterfront at other activities, athletics and aquatics sport to name two, that could benefit from the same support and provide the same return to the community.

We look forward to the City's progress in these areas and are encouraged that this is a small sign in the recognition of the importance of high performance sport in facilitating international and community pride.

Sincerely,

Chris Rudge
CEO and Secretary General

cc: Mayor David Miller
Joe Halstead, Commissioner, Economic Development, Culture & Tourism, City of Toronto
John Carmichael, President, Rowing Canada
Alan Rouf, Executive Director, Rowing Canada
Diana Schafer, President, Canadian Canoe Association
Anne Merklinger, Director General, Canadian Canoe Association

2070, rue Peel
Bureau 300,
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Canada H3A 1W6
Tél: (514) 861-3371
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85 Albert Street
Suite 1400,
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Tel: (613) 244-2020
Fax: (613) 244-0169

21 St Clair Avenue E.
Suite 800, Toronto, ON
Canada M4T 1L9
Tel: (416) 962-0262
Fax: (416) 967-4902

www.olympic.ca

24

COUNCIL OF COMMODORES

CHAIRMAN
Brian J. Knoll

18 Martin Crescent
Toronto, ON M4S 2V4
Tel 416-483-5543
Fax 416-483-5543

SECRETARY
Susan Hyndman

141 George Street
Toronto, ON M5R 2L8
Tel 416-967-7245
Fax 416-967-5710

March 10, 2005-03-10

Via e-mail

Nancy Gaffney, Waterfront Specialist
Watershed Management Division
Toronto and Region Conservation
5 Shoreham Drive, Toronto, Ontario, M3N 1S4

Re: Toronto Dragon Boat Watercourse

Dear Ms. Gaffney;

You may be aware that Council of Commodores represents 40 boating clubs in the Golden Horseshoe, 24 within the boundaries of the City. Those 24 clubs represents over 15,000 men, women and children who use the Toronto Waterfront as their favourite recreation destination on a regular basis. As such we are constantly involved with activities on the waterfront.

I am unable to attend this evening's EA meeting but I understand that our member clubs that are of closest proximity will be well represented.

On behalf of the rest of our member clubs, at this time, we do not have serious concerns with the watercourse project other than the impact on marine activities during the construction phase. We understand that one option being considered is that building materials may be off loaded and/or concrete sections constructed in the Port lands area and then moved by water to the watercourse site. During the summer months there is large amount of boating activity in the inner harbour including commercial ship traffic, recreational boating and youth sail training, canoeing and passenger ferry traffic. From a safety point of view, we would strongly suggest that any waterborne transportation of materials from the Port lands to the site should be done via the Eastern Gap and across the south side of the Toronto Islands and not through the Inner Harbour.

I am a member of the Toronto Port Authority's Marine Advisory Committee and will be bring this issue up at their next meeting.

Please feel free to contact me with any questions or concerns.

Sincerely,

Brian Knoll,
Chair, Council of Commodores

Sustainable EDGE Ltd.

285 YORKLAND BOULEVARD • TORONTO • ONTARIO • M2J 1S5
T 416.488.4425 • E INFO@S-EDGE.COM • WWW.S-EDGE.COM

K.P.

25

THE WEST BEACHES BREAKWATER WITH AN ENVIRONMENTAL AGENDA

A concept has been floated in the Toronto community over the last decade that combines the reconstruction of the west beaches breakwater with a multiplicity of compatible purposes:

1. **STORMWATER MANAGEMENT**

   By creating an inshore wetland, either floating or lake filled, the stormwater impacts on water quality inside the breakwater can be mitigated. A bubble curtain may be used as a partial barrier at gaps in the breakwater. A prototype Lake Restorer is to be construction this summer at the Peter Street Slip. An earlier study examined the feasibility of maintaining swimmable conditions in Brigantine Cove. The West Beaches stormwater retention facilities has done nothing to resolve beach closings due to Humber River discharge.

2. **OFFSHORE WINDPOWER**

   The opportunity to install about 10 Mw of wind turbine capacity can be realized by integrating the foundations installation with breakwater construction. As with the Exhibition Turbine, the work could be financed by a community cooperative and Toronto Hydro helping to offset breakwater construction costs.

3. **RECREATIONAL PATHWAY**

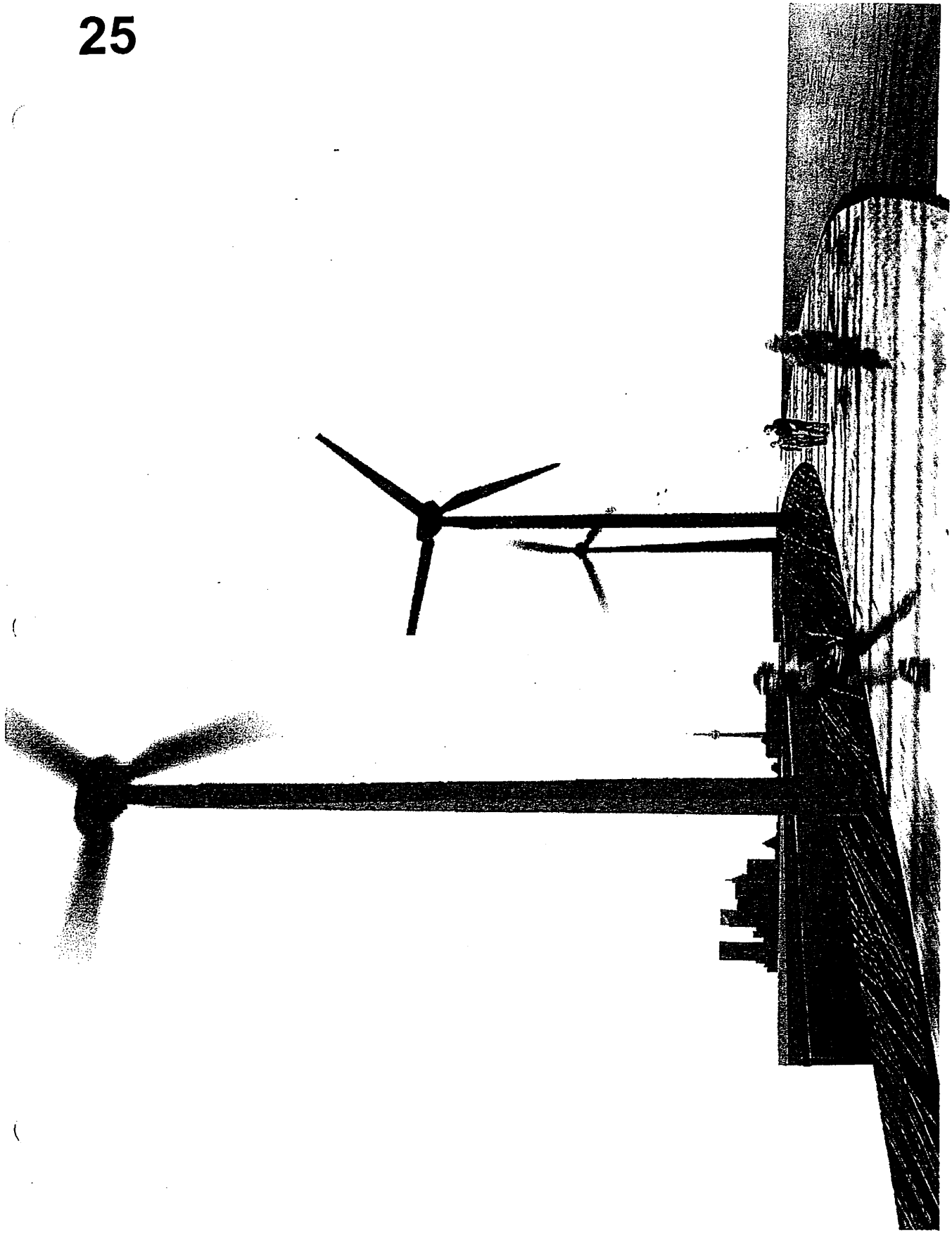
   The breakwater could be configured as a boardwalk with pedestrian lift bridges at the gaps. This would alleviate the bottleneck for pedestrians, cyclists, and skateboarders along portions of the West Beaches. It would also be a spectacular way to view the City, watch races, moor small craft, etc.

It is time for some real vision for our Waterfront – something more than a repair job financed on a one-time event.

Greg Allen, P.Eng
President

10 March 2005

25



26

"publisher"
<publisher@dragonboatworld.com>
03/10/05 10:42 AM

To ngaffney@trca.on.ca
cc
bcc
Subject Dragon Boat World Magazine and Toronto's new water course

Dear Ms. Gaffney,
I am the Publisher and Editor of Dragon Boat World, the world's first and foremost authority on the sport of dragonboating. We are a Toronto based publication with an estimated readership of 30-50,000 in over 20 countries. I also have successfully represented Canada in the sport at several world and continental championships.

As a long time Toronto resident and dragonboater, I'd like to lend my voice to those supporting this fantastic new facility planned for Marilyn Bell Park.

I urge you not to be swayed by the various special interest groups with private
agendas trying to undermine this venture.

This planned breakwater will succeed in drawing people to the lake, making the area and city more vibrant in the process. It fits in perfectly with the revitalization plan.

Canada, and most specifically, Toronto, is currently riding an unprecedented wave of dragonboating success and popularity. It is one of the fastest growing sports in the world and Toronto based teams have won the world championships 3 times in a row. We also have dozens of teams that consist wholly of breast cancer survivors, transplant candidates or survivors, mentally-challenged adults, high school students or the blind.

Supporting this sport and those teams is reason enough this facility should be built. But, more importantly, the facility should be built because of it's potential for opening up this portion of the waterfront to the citizens of Toronto. The Dragon Boat Club Crew World Championships, while a great opportunity, are mere window dressing in comparison.

I urge you to stay true to the vision.

Konrad Doerrbecker
Publisher/Editor
Dragon Boat World

KD

27

[redacted]

03/10/05 01:51 PM

To <ngaffney@trca.on.ca>
cc
bcc
Subject Beaches Watercourse

Dear Ms. Gaffney,
For health reasons presently unable to attend the Western Beaches Watercourse Facility review on March 10/05, I would appreciate receiving a copy of the basic plannig and design plans.
Thank you.

[redacted]

27

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/17/05 11:25 AM

To [redacted]
cc
bcc
Subject Re: Beaches Watercourse

Dear [redacted]

I have sent you a copy of the preliminary design plans as presented at last week's public forum by courier. Additionally, please find attached a project description for your reference.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

WBWF General Project Description.pdf

[redacted]

03/10/05 01:51 PM

To <ngaffney@trca.on.ca>
cc
Subject Beaches Watercourse

Dear Ms. Gaffney,
For health reasons presently unable to attend the Western Beaches Watercourse Facility review on March 10/05, I would appreciate receiving a copy of the basic plannig and design plans.
Thank you.

[redacted]

27

TORONTO AND REGION Conservation
for The Living City

March 17, 2005

BY COURIER

[redacted]

Dear [redacted]

RE: Western Beaches Watercourse Facility – Municipal Class EA

Please find enclosed the preliminary design plans for the new breakwater and Cowan Avenue outfall as presented at the public forum on March 10, 2005. If you have any questions in regard to the materials provided, please do not hesitate to contact the undersigned.

Yours truly,

for Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
Tel. 416-661-6600, ext 5313
Fax. 416-667-6278
Email: ngaffney@trca.on.ca

Encl.

TORONTO

Fax Cover

Economic Development, Culture & Tourism Department
Joe Halstead, Commissioner

Tourism Division
Toronto City Hall
100 Queen Street West, 9th Floor East Tower
Toronto ON M5H 2N2

John Tracogna, Director
Toronto International
Tel: 416 397-5401
Email: jtracogn@toronto.ca

SEND TO

Date: March 11th/05

Attention: Nancy Gaffney

Company/Dept.: TRCA

Fax Number: 416-667-6278

FROM

John Tracogna, Director
Toronto International, Tourism Division

Number of Pages 3 (Including cover sheet)

If you do not receive all pages, call 416-397-5401 asap.

MESSAGE

Hi Nancy,

I was sent this letter from Rowing Canada. I believe this should go to you for "Comments" ?
A similar letter I suspect would have gone out to others?

Please let me know if there is anything I need to respond to.

Thanks,

John

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ROWING CANADA AVIRON
www.rowingcanada.org

March 10, 2005

Mr. John Tracogna
Director, Toronto International
EDCT, Tourism Division
City of Toronto
100 Queen Street West
City Hall, 9th Floor, East Tower
Toronto, Ontario M5H 2N2

Dear Mr. Tracogna,

I am writing to you as a stakeholder in the proposed new Western Beaches Watercourse, and in response to the request for input from TWRC. There are several points that we would like to bring forward.

1. *Rowing Canada Aviron* supports the development of a multi-sport Watercourse within the GTA. We believe this development is long overdue and, if designed and built to the proper FISA standards, will enable us to attract numerous regattas to the city while enhancing the city economically and culturally.

2. We are aware of the significance of the three levels of government coming together on a project for the Toronto Waterfront—we understand how long this has been in discussions and we are very pleased that the three levels of government have committed $23M to a project to support water-sports on the Waterfront.

3. We have been advised by TWRC that this Watercourse is not being built as a rowing facility and, therefore, will not enable us to attract these events. While regrettable, we understand the cost constraints of building a 2000 meter course in this location. It is important that this Watercourse is NOT identified as a rowing course as this is misleading.

4. Rowers support event hosting and welcome an international dragon boat Championship. We understand from *Dragon Boat Canada* that the event in August, 2006 may be held in a number of venues in Toronto. To build a course that has limited use and that cannot be used by other sports is a missed opportunity. This would be ameliorated if there were a plan, timetable and budget for its extension to a multi-sport facility.

201 - 1234 Esquimalt Rd. - Victoria, BC V9A 3N8 - Tel/tél: (250) 361-4222 or/ou 1-877-RCA-GROW - Fax/télec: (250) 361-4211 - E-mail/courriel: rca@rowingcanada.org
Member of F.I.S.A., Canadian Olympic Committee/Membre de F.I.S.A., Comité Olympique Canadienne

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5. Our primary concern is not with the event—our concern is with the use of the facility after the event. We have three concerns:
    - Safety: The increased boat traffic that could result if a dragon-boat clubhouse with docks is installed in *Marilyn Bell Park* will result in a huge impact on the safety of dragon-boaters, canoeists and rowers. There are cabin-cruisers using the marina in *Ontario Place*. Collisions will happen and when collisions occur on water, there is potential for serious consequences.
    - Process: Where are the sport governing bodies in the design of the facility? Sport governing bodies (SGBs) bring order, technical knowledge, accountability, structure, and certainty. None of the three SGBs with a direct interest in this facility--*Dragon-Boat Canada*, *Rowing Canada Aviron* and the *Canadian Canoe Association* have been invited to participate in the design of this watercourse beyond being permitted a voice at sessions such as this. We want to see the SGBs have a place at the table.
    - The *Argonaut Rowing Club*, as a member club of *Rowing Canada Aviron*, is the most effected by this proposed project. We believe it is vital to include their representatives in the planning process to ensure that the final result provides a legacy for rowing in Toronto, after August, 2006.

6. The only potential advantage to the rowing community of this initiative is the increase in rowable flat water in the area. The plans we have seen to date do not clearly indicate whether there will be more, less, or the same amount of rowable flat water after the course is constructed. Our support for this project will be determined by the resolution of this variable.

Thank you for the opportunity to comment.

John B. W. Carmichael
President
Rowing Canada Aviron

29

"Karen Pitre"
<kpitre@sympatico.ca>
03/11/05 01:30 PM

To "Jo-Anne Lane" <jlane@gartnerlee.com>, "Nancy Gaffney" <ngaffney@trca.on.ca>, "Kristin Jenkins" <kjenkins@towaterfront.ca>

cc

bcc

Subject FW: Public Meeting

For the files..

-----Original Message-----
From: Don McLeod [mailto:drmcleod@sympatico.ca]
Sent: Friday, March 11, 2005 7:11 AM
To: kpitre@sympatico.ca
Subject: Public Meeting

Karen

A job well done last evening!

In listening to all that transpired I would conclude that we, as a community, are on the right track. The group that worked so diligently over the past few years has found success like none other in recent memory.

-three levels of government working together
-a world class event coming to our City
-real change to the waterfront
-excitement and interest of the public

I echo the thoughts of many last evening who know that this is but a beginning. If we are able to bring the players together we will continue effectively to reach for more. The catch phrases we use at the Boulevard Club are MORE ON THE SHORE and COTTAGE IN THE CITY. We are proud to be providing more for the citizens of Toronto.

It was stated at the meeting that all that is done is a compromise. The compromise must work for all. You and the TWRC are producing a product that is open ended and for that we applaud you.

The Dragon Boat Group have learned how to achieve success. The other groups need to learn this too, so that we can move ahead. Perhaps trying to have someone take ownership for a crumbling Break Water is not the most productive exercise.....rather than foisting the past on the present we should, perhaps, be creating a vision for the future that gets buy in from all parties. Politicians love a cause and sports groups love success. Maybe that is part of what the Dragon Boat Group has learned.

It was clear that at the very least, some remediation of the crumbling section of the current wall is imperative, if only to provide safety until further development can be undertaken.

Once March Break is past, I look forward to continuing to work for success on our waterfront.

Don McLeod

29

President,
Boulevard Club
--
Don McLeod
377 Keewatin Ave
Toronto, ON
M4P 2A4

Phone: 416 481-8466 home
416 347-8751 cell

30

[redacted]

03/11/05 12:29 PM

To ngaffney@trca.on.ca
cc
bcc
Subject Questions about March 10, 2005 public consultation.

Dear [redacted]
My name is [redacted] and I am one of the student of University of Toronto and I am now taking a environmental geography course. I have attended the public consultation meeting yesterday regarding the revitalization project going on in Waterfront and Western Beaches. In order to write a report for my course project and as my own interest, I would like to ask you to kindly give me a brief description about the purpose of holding yesterday's meeting and also the regulatory framework of the meeting. I would also like to know the sponsors of this public consultation and an overview of relevant environmental and planning issues.
Thank you very much for taking up time to help me answering these questions and I look forward to hear from you soon. Take you very much.

Best wishes,

Yours sincerely,
[redacted]

30

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/11/05 02:37 PM

To [redacted]
cc
bcc
Subject Re: Questions about March 10, 2005 public consultation.

Dear [redacted]

Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. The purpose of the public forum yesterday was to introduce the project to the public and to provide an opportunity discuss potential impacts and local sensitivities related to the project. This forum fulfilled the first point of contact with the public in accordance with the requirements under the Municipal Class EA process.

The Toronto Waterfront Revitalization Corporation and the City of Toronto are co-proponents of the project. Funding for the project, including the public forum as part of the Municipal Class EA, is provided by three levels of government as facilitated by TWRC.

I have attached a general project description of the Western Beaches Watercourse Facility to give you an overview of environmental and planning issues. If you require additional information or have further questions, please do not hesitate to contact the undersigned.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

WBWF General Project Description.pdf

[redacted]

[redacted]

03/11/05 12:29 PM

To ngaffney@trca.on.ca
cc
Subject Questions about March 10, 2005 public consultation.

Dear Ms. Gaffney,
My name is Helen Wong and I am one of the student of University of Toronto and I am now taking a environmental geography course. I have attended the public consultation meeting yesterday regarding the revitalization project going on in Waterfront and Western Beaches. In order to write a report for my course project and as my own interest, I would like to ask you to kindly give me a brief description about the purpose of

31

[redacted]

03/11/05 06:27 PM

To <ngaffney@trca.on.ca>
cc "'Judy Sutcliffe'" <jsutcliffe@sympatico.ca>
bcc
Subject schedule of events

Nancy,

Here are the dates for regatta's and events that the watercourse construction could impact. This year's planned Schedule and events are:

Toronto High School Regatta	April 30th 2005	Entire watercourse from Humber
		East to Ontario Place
Argonaut Open House (learn to row) East gap to	June 25th 2005	750m West from
		Argonaut Club
Hogtown Heats: East gap to Argonaut Club	August 14th 2005	750m West from [redacted]
Frostbite Sprints East gap to	November 6th 2005	750m west from
		Argonaut Club
Learn to Row watercourse (preference,	April 31 to September 7th	Entire
		protected water at
Ontario Place)		

31

Friday

Every day but

NOTE: Every Saturday throughout the rowing season the full length of the watercourse is used for time trials from 5:30AM to 9:00AM

The schedule repeats again through the 2006 season with the event dates in relatively the same place as they are scheduled to coincide or not conflict with other local and national events. The first event of the season being the Toronto High School Invitational on the 29th of April 2006 or 4th of May 2006

Please let me know if you have additional questions.

[redacted]

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"Fenwick Bonnell"
<fenwick@powellandbonnell.com>
03/11/05 06:27 PM

To <ngaffney@trca.on.ca>
cc "'Judy Sutcliffe'" <jsutcliffe@sympatico.ca>
bcc
Subject schedule of events

Nancy,

Here are the dates for regatta's and events that the watercourse construction could impact. This year's planned Schedule and events are:

Toronto High School Regatta 30th 2005 Humber	April	Entire watercourse from East to Ontario Place
Argonaut Open House (learn to row) East gap to	June 25th 2005	750m West from Argonaut Club
Hogtown Heats: East gap to Argonaut Club	August 14th 2005	750m West from
Frostbite Sprints East gap to	November 6th 2005	750m west from Argonaut Club
Learn to Row watercourse (preference, Ontario Place)	April 31 to September 7th	Entire protected water at

Every day but Friday

NOTE: Every Saturday throughout the rowing season the full length of the watercourse is used for time trials from 5:30AM to 9:00AM

The schedule repeats again through the 2006 season with the event dates in relatively the same place as they are scheduled to coincide or not conflict with other local and national events. The first event of the season being the Toronto High School Invitational on the 29th of April 2006 or 4th of May 2006

Please let me know if you have additional questions.

Fenwick Bonnell

Powell & Bonnell

236 Davenport Road

Toronto, Ont.

M5R 1J6

www.powellandbonnell.com

33 G&C

FAX

Name	Company / City	Telephone #	Fax #
Nancy Gaffney			416.661.6898

March 15, 2005

Pages: 3

Please refer to the attached letter. Thank you.

Robert Blunt
416.595.2462
rblunt@goodmancarr.com
0404416
RWB 0403

33 G&C

March 15, 2005

Robert Blunt
Land Use Planner
Direct Line: 416.595.2462
rblunt@goodmancarr.com
File Number: 0404416

FACSIMILE AND MAILED

Ms. Karen Petrie
The Lonsdale Group
c/o TWRC
207 Queens Quay West, suite 822
Toronto ON M5J 1A7

and

Ms. Nancy Gaffney
Waterfront Specialist
Toronto and Region Conservation Authority
5 Shoreham Drive
Toronto ON M3K 1S4

Dear Ms. Petrie and Ms. Gaffney:

Re: Class Environmental Assessment
Western Beaches Watercourse Facility

Please be advised that we are the solicitors for the Argonaut Rowing Club which is located at No. 1225 Lakeshore Boulevard West in the City of Toronto. As you are no doubt aware, the Argonaut Rowing Club is the "stakeholder" most impacted by the above-noted proposal.

The purpose of this letter is to formally accept the invitation offered by Ms. Petrie for meaningful stakeholder's participation in the review of the subject dragon boat proposal. In order for the Argonaut Rowing Club (and its consultants) to participate with an informed perspective, we request three (3) copies of the Mac Viro et. al. Report(s) respecting the feasibility/review/details of the version of the dragon boat course that was presented at the EA Open House meeting on March 10th, 2005. It appears that this is now the preferred dragon boat ("the preferred option") course. We need these documents in order to provide you with comments by your deadline of March 31st, 2005

As you are aware, on or about February 25th, 2005 you provided us with a copy of the Dragon Boat Course Feasibility Study Final Report dated September 2004 (Dragon Boat Final Report). We note that the eleven (11) options that are detailed in that Dragon Boat Final Report do not correspond with the two (2) drawings that were presented to us at the initial Stakeholder's Meeting on February 21st, 2005. Therefore, we also formally request three (3) copies of those February 21st, 2005 drawings and Mac Viro et. al Report(s) respecting the

feasibility/review/details of those two proposals for our review and comment in relation to "the preferred option".

It goes without saying that, until we have the details of the two (2) proposals that were presented on February 21st, 2005 and the two (2) new proposals that were presented on March 10th, 2005, we will not be able to provide detailed and informed comments respecting "the preferred option" as requested of the Argonaut Rowing Club.

Lastly, we note that neither of the two (2) proposals that were presented on February 21st, 2005 and the two (2) proposals that were presented on March 10, 2005 showed a dragon boat course that provides for a **potential** extension to a 2000 metre multi-sport course. This is especially troubling in light of Ms. Petrie's comments on February 8th, 2005 that a future expansion to a 2000 metre multi-sport course is no longer under consideration. Please provide us with Toronto Waterfront Revitalization Corporation's reasoning for eliminating the **potential** for an expansion to a 2000 metre multi-sport course given that justification for the dragon boat course was based on the **potential** extension of the dragon boat course to the "Legacy" multi-sport length that was apparently the goal of the Federal government, Provincial government and municipal government.

As you are no doubt aware, unlike what was presented in the City of Toronto Background Note for a Multi-Sport Watercourse dated January 11, 2005, the Argonaut Rowing Club **is not in support** of the proposal as presented to us. However, upon receipt of the above-noted documents, we hope that this will be the beginning of meaningful, constructive dialogue.

Yours truly,

Robert Blunt

cc.: John Campbell, TWRC

Mayor and all Members of Council (City of Toronto)

John Carmichael, President, Rowing Canada Aviron

Fenwick Bonnell, Argonaut Rowing Club

R:\Blunt Robert\March 15.doc

34

FAX COVER SHEET

FAX NUMBER	14162144591
FROM	David Allsebrook
DATE	2005-03-15 20:39:46 GMT
RE	NYC event schedule and course map

COVER MESSAGE

Andrea

As requested at the February meeting of the Watercourse Stakeholder Advisory Committee, here is the National Yacht Club course map and on water schedule for the next two years.
I am still collecting the information from the Toronto Sailing and Canoe Club.
Is there another meeting of the Committee planned?
Best regards
David Allsebrook
NYC/TS&CC

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National Yacht Club
On the water event dates 2005 – 2006.

2006

Launch April 30 – May 1

Weeknight racing series May 9- Sept 12 Mondays, Tuesdays and Wednesday approx. 5 PM to sunset. The Wednesday Series continues until September 28.

Sailing school off the break wall east of Ontario Place – May – August weekdays.

Sailpast May 28

Weekend regattas:

2.4 Metre May 21-23

NOTSA June 12

Allberg 30 June 18-19

NOOD June 22-26 – major event – up to six race courses set out in the lake.

C&C Regatta July 1 - 3 – major event – multiple race courses

Allberg Open August 20-21

2.4 Metre National Championship August 26-28

LORC Open regatta August 27-8

Shark Gold Cup September 10-11

Albacore regatta September 23-25

Around the Island race October 2

34

October 21-23

2006

Launch April 29-30

Weeknight racing series May 8- Sept 11 Mondays, Tuesdays and Wednesday approx. 5 PM to sunset. The Wednesday Series continues until September 27.

Sailing school off the break wall east of Ontario Place – May – August weekdays.

Sailpast May 27

Weekend regattas:

2.4 Metre May 20-22

NOTSA June 11

Allberg 30 June 17-18

NOOD June 21-25 – major event – up to six race courses set out in the lake.

C&C Regatta June 30, July 1 - 2 – major event – multiple race courses

Allberg Open August 19-20

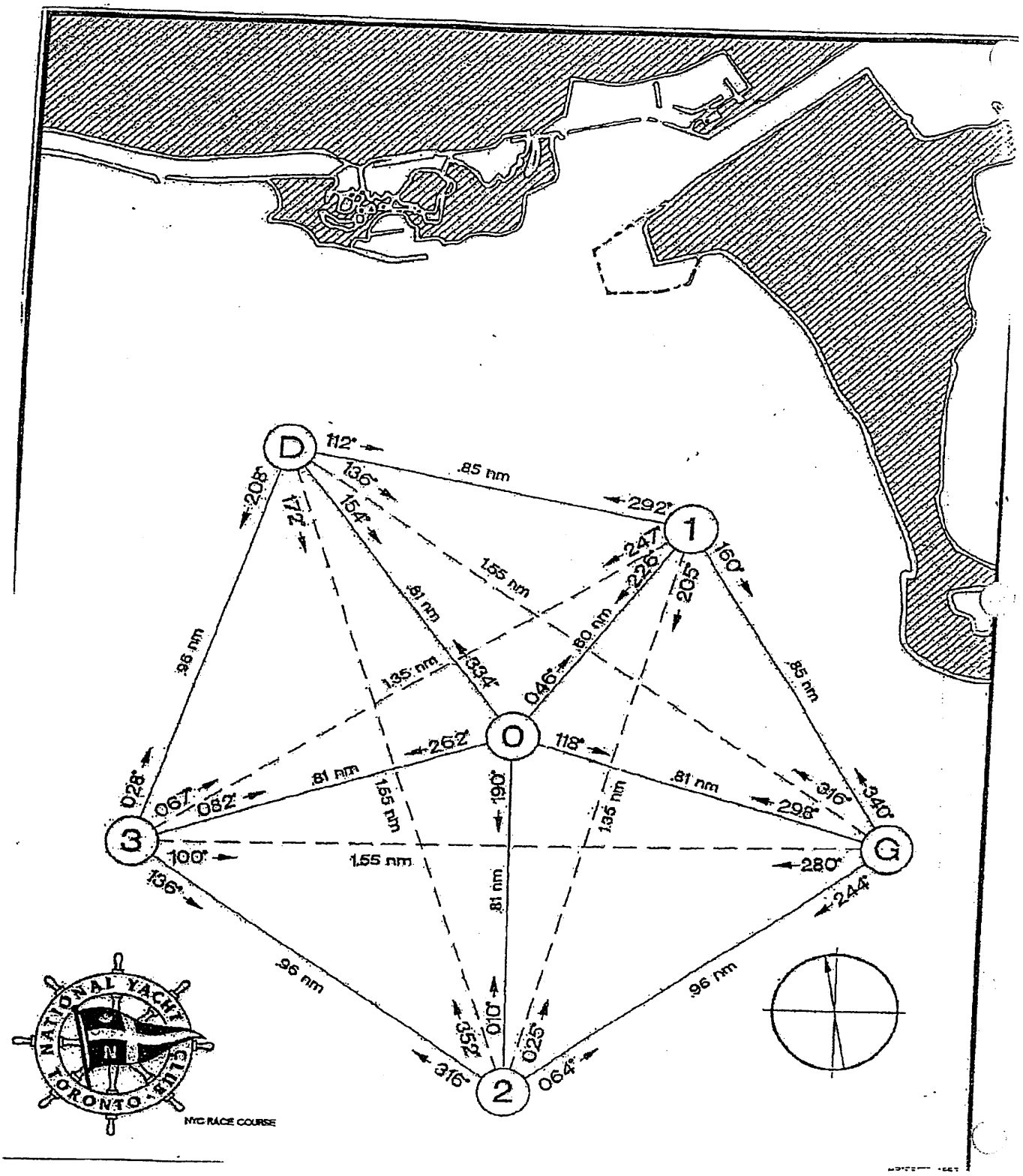
2.4 Metre National Championship August 25-27

LORC Open regatta August 26-7

Albacore regatta September 22-24

Around the Island race October 1

Haulout October 20-22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NATIONAL YACHT CLUB TORONTO
NYC RACE COURSE

35

[redacted]

03/15/05 12:09 PM

To ngaffney@trca.on.ca
cc info@towaterfront.ca
bcc
Subject Dragon Boat Meeting

Nancy Gaffney,

I attended the meeting relating to the Dragon Boat course planned for the Toronto waterfront last Wednesday night. I am writing to express my total displeasure with the presentation and discussion that was convened at the National Trade Centre.

Though a Toronto resident, I found the venue very difficult to locate due to the poor signage used. The National Trade Centre is a large and beautiful building and was an ideal and centrally located venue. However, once inside the building, the signs indicating the location of the venue were too small to be legible from a distance. I spent a considerable amount of time walking back and forth within the building.

The second point I would like to make is the fact that there were no handout materials available. Having attended and participated at a number of other City of Toronto public consultation events in the past, I was under the impression that handout materials are a standard practice. Unfortunately, the only materials available were those provided by the Dragon Boat Federation.

I am appalled that neither the TRCA and/or the Toronto Waterfront Revitalization Corporation prepared applicable materials for distribution. Given that this project has the potential to result in some serious environmental impacts (specifically to sensitive fisheries resources), I would have preferred to take some materials home to review and digest prior to writing this letter.

This project is costing Toronto tax payers a great of money, $23 million, to build was has been billed as a "world class facility on the Toronto waterfront". Some of this money would have been well spent to provide those in attendance with suitable handout materials. Why did this not occur?

My next point ties in with the above. The display materials were too small and as a result were not clearly legible. Though my eye sight is quite good, I had great difficulty reading and reviewing the boards containing the display materials. Once again, I feel additional monies should have been spent to convey the materials as clearly as possible.

It is my understanding that this project will result in some significant impacts to fish habitat. This was not clearly conveyed at the meeting. What is proposed to reduce the likely impacts to fish habitat? Having recently built a dock and crib wall at my cottage, I was forced to obtain a permit from the Ministry of Natural Resources prior to construction. This was not only a long, arduous process, but also required that I carry out construction at specified times of the year to reduce impacts to the fish community. Is the TRCA obligated to obtain a similar permit(s), and how will this affect the timing of construction?

The Notice indicated that this project is following the Municipal Class Environmental Assessment. However, at the meeting, one of the display boards indicated that a federal environmental screening is necessary. Could

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you please explain the differences and how they apply to this project?

Lastly, I read that the proposed 650 m course is not long enough for most canoe or rowing events. Is this correct? If not, are there plans to expand the course in the future to accommodate other types of events? I agree with a number of articles that suggest the money could be better spent to suit the needs of various water users.

Are there any additional public meetings planned in the near future? I am of the opinion that further meetings are required to discuss many of my issues noted above.

As I will be discussing this issue with my local councillor, I would appreciate a written response to my issues and questions. Could you please provide your written response by March 31?

Sincerely,

[redacted]

35

Aancy Gaffney

04/05/2005 03:51 PM

Sent by: Alex Phillips

To: [redacted]
cc:
Subject: Re: Dragon Boat Meeting

Dear [redacted]

Thank you for your input on the Western Beaches Watercourse Facility Environmental Assessment (EA) and I apologize sincerely for the delay. With regard to your input, I have provided the following responses for your information.

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35

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

PIC #1 - Text Boards - 24x36.pdf

[redacted]

[redacted]
>

03/15/2005 12:09 PM

To ngaffney@trca.on.ca
cc info@towaterfront.ca
Subject Dragon Boat Meeting

Nancy Gaffney,

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Though a Toronto resident, I found the venue very difficult to locate due to the poor signage used. The National Trade Centre is a large and beautiful building and was an ideal and centrally located venue. However, once inside the building, the signs indicating the location of the venue were too small to be legible from a distance. I spent a considerable amount of time walking back and forth within the building.

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I am appalled that neither the TRCA and/or the Toronto Waterfront Revitalization Corporation prepared applicable materials for distribution. Given that this project has the potential to result in some serious environmental impacts (specifically to sensitive fisheries resources), I would have preferred to take some materials home to review and digest prior to writing this letter.

This project is costing Toronto tax payers a great of money, $23 million, to build was has been billed as a "world class facility on the Toronto waterfront". Some of this money would have been well spent to provide those in attendance with suitable handout materials. Why did this not occur?

35

[redacted] 04/06/2005 10:04 AM

To NGaffney@trca.on.ca
cc
bcc
Subject Re: Dragon Boat Meeting

History: This message has been replied to.

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When do you plan to release the environmental report for public review? Will this report be available over the internet?

Thanks again for your response.

Regards,

[redacted]

>From: Nancy Gaffney <NGaffney@trca.on.ca>
>To: [redacted]
>Subject: Re: Dragon Boat Meeting
>Date: Tue, 5 Apr 2005 15:51:38 -0400
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Nancy Gaffney/MTRCA
Sent by: Alex Phillips

04/06/2005 11:46 AM

To "Robert Rahman" <rrahman39@hotmail.com>
cc
bcc
Subject Re: Dragon Boat Meeting

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Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

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[redacted]

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36

Aancy Gaffney

04/05/2005 03:51 PM

Sent by: Alex Phillips

To: [redacted]
cc:
Subject: Re: Dragon Boat Meeting

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you please explain the differences and how they apply to this project?

Lastly, I read that the proposed 650 m course is not long enough for most canoe or rowing events. Is this correct? If not, are there plans to expand the course in the future to accommodate other types of events? I agree with a number of articles that suggest the money could be better spent to suit the needs of various water users.

Are there any additional public meetings planned in the near future? I am of the opinion that further meetings are required to discuss many of my issues noted above.

As I will be discussing this issue with my local councillor, I would appreciate a written response to my issues and questions. Could you please provide your written response by March 31?

Sincerely,

[redacted]

36

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

04/06/2005 11:46 AM

To [redacted]
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bcc
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37

[redacted]
03/17/05 09:24 PM

To ngaffney@trca.on.ca
cc
bcc
Subject Western Beaches Watercourse Information

Dear Ms Gaffney,

Hello, my name is [redacted] and I am geography student at University of Toronto. I am currently working on an assignment which involves evaluation of an open house / public meeting. I went to the open house fand the presentation or the breakwater construction for the western beaches on March 10, 2005 (Thurs). I just wonder whether you could give me any other useful information concerning the project and may be a general idea of which company or clubs or institutes attend that night.

THank you very much for your attention! Hope it is not too much trouble.

Yours Sincerely,
[redacted]

37

Nancy Gaffney/MTRCA
Sent by: Alex Phillips

03/21/05 04:52 PM

To [redacted]
cc
bcc
Subject Re: Western Beaches Watercourse information

Dear [redacted]
Thank you for your interest in the Municipal Class EA process for the construction of a new breakwater in the Western Beaches. Please find attached a general project description of the Western Beaches Watercourse Facility to give you an overview of the project.

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

WBWF General Project Description.pdf
[redacted]

[redacted]

03/17/05 09:24 PM

To ngaffney@trca.on.ca
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38

ROWONTARIO

1185 Eglinton Avenue East, Suite 405
Toronto, Ontario M3C 3C6
Telephone: 416-426-7002
Fax: 416-426-7309
E-mail: admin@rowontario.ca
www.rowontario.ca

March 22nd, 2005

Ms. Karen Pitre
Toronto Waterfront Revitalization Corporation
207 Queen's Quay West
Suite 822
Toronto, ON M5J 1A7

Dear Ms. Pitre,

As the governing body for rowing in Ontario, ROWONTARIO has an interest in responding to the Toronto Waterfront Revitalization Corporation's request for input on the proposed Western Beaches Watercourse. Our feedback is as follows:

- We appreciate the significance of the TWRC's having obtained support from all three levels of government towards the development of sport and recreation on Toronto's waterfront.
- We understand that financial constraints have limited the range and scope of the proposed Watercourse, and that building it to the length required for rowing is not planned at this time. We would suggest therefore that proponents of the proposed watercourse cease to refer to it as a multi-sport facility, including rowing.
- We believe that a watercourse suitable for canoe/kayak racing and Masters-level rowing is possible, and encourage the TWRC to plan and budget for the development of a course suitable for these sports, either as an extension of the proposed venue, or elsewhere on the Toronto waterfront, in the near-term as opposed to distant future.
- We support the inclusion of Rowing Canada Aviron and the Argonaut Rowing Club in the ongoing Watercourse development process. Significant participation from these two groups will bring solid technical rowing expertise to the project, and help safeguard the viability of our sport along the western beaches.
- We are extremely concerned about potential safety considerations arising from increased boat traffic in the affected area that might occur with the development of a dragon-boat club house in Marilyn Bell Park and urge the City Parks & Recreation Department, the TRCA and the TWRC to state categorically that such a development will not occur. Significant input from the Argonaut Rowing Club should be sought on this matter.

Based on the information provided to date, ROWONTARIO believes that project as currently proposed will not benefit rowing in Toronto. On the other hand, there are several unknowns that have the potential to have a negative impact on our sport in the area. Timely and effective consultation with the major rowing stakeholders named above may alleviate these concerns.

Thank you for the opportunity to provide input.

George Barkwell
President
ROWONTARIO

39

[redacted]

03/29/2005 11:45 AM

To "Nancy Gaffney" <NGaffney@trca.on.ca>
cc
bcc
Subject "Class EA Western Beaches Watercourse Facility"

Hello,

I would appreciate if my name is added to the above noted project's mailing list.

Thank you. Have a good day.

Regards,

[redacted]

40

G&C

March 31, 2005

Robert Blunt
Land Use Planner
Direct Line: 416.595.2462
rblunt@goodmancarr.com
File Number: 0404416

FACSIMILE AND HAND DELIVERED

Ms. Karen Pitre
c/o TWRC
207 Queens Quay West, suite 822
Toronto ON M5J 1A7

and

Ms. Nancy Gaffney
Waterfront Specialist
Toronto and Region Conservation Authority
5 Shoreham Drive
Toronto ON M3K 1S4

Dear Ms. Pitre and Ms. Gaffney:

Re: Environmental Assessment Request for Comments
Western Beaches Watercourse Facility

As you are aware, we are the solicitors for the Argonaut Rowing Club which is located at No. 1225 Lakeshore Boulevard West in the City of Toronto.

This letter is further to our letter to Mr. Campbell, Director of the Toronto Waterfront Revitalization Trust dated November 26th, 2004 and our letter to you dated March 15th, 2005.

We would like to state at the outset that the Argonaut Rowing Club has very serious concerns about the "preferred" site, the criteria used to choose the site, and how the facility will be used after the event. The Argonaut Rowing Club believes that even with the best course design this will never be a "multi-use facility" or a "world class facility".

Thank you for providing us on March 17th, 2005 with some of the background materials that we had requested. Unfortunately, crucial details of the proposal from the Argonaut Rowing Club's perspective are still not available, namely:

a) the timing of construction and the location of the staging of construction;

b) the details of the actual design of the course with specific reference to safety controls and wave attenuation structures; and

c) the post regatta management of the course.

This is very unfortunate since we are therefore unable to provide our comprehensive list of comments at this time and we will be pleased to do so when those details have been made available to us. However, we will provide you with our comments in light of the information with which we have been provided thus far.

We believe that the Argonaut Rowing Club is the "stakeholder" most impacted by the proposal if the implementation of the "Legacy" is not thoroughly considered. Especially from the perspective of the safety of its members, its ability to deliver programs, and ultimately its financial survival will be in serious doubt. At best, this facility will have a neutral impact on the Argonaut Rowing Club and its ability to run its programs since we have been told that this course is not being designed to take into account a potential expansion to provide a world championship or Olympic calibre rowing venue.

The Argonaut Rowing Club believes that other sites/options on the Western Beaches offer opportunities to benefit all water sports.

Argonaut Rowing Club Background

The Argonaut Rowing Club (hereinafter the "ARC") has a long history (over 50 years) of development of the sport of rowing from its present location on the western beaches (the Club itself is over 132 years old!). The rowing course stretches 4.4 kilometres from Ontario Place to the mouth of the Humber River (in fact there is another 700 metres that we use inside Ontario Place).

The ARC "on water training" begins when our docks go in at the end of March and carries on until at least mid-November, when the docks are taken out for the winter season. In fact, in the past, National Rowing Team athletes stretch the on-water season almost through the entire winter depending on ice conditions.

With respect to the actual club house facilities, the building is accessible to those who wish to train 12 months of the year, 24 hours a day. In fact, it is not uncommon to find athletes training at 5 in the morning or 10 at night 12 months of the year. The ARC provides a training home for competitive (including National Team athletes that as recently as the 2004 Athens Olympics call the ARC home), adaptive (athletes with disabilities), juniors, recreational and masters rowing. The ARC is also the home club (training facility) of Branksome Hall and in the very recent past neighbouring public schools have called the ARC home. Last year, the ARC was the home of the Canadian National Adaptive Rowing Team and one of our members was recently named National Adaptive Team Co-ordinator with the full intention of making the ARC the home club for the National Adaptive Team. Also important to the growth of the sport and our outreach to the greater community and the economic viability of the Club are our Learn-to-Row and Corporate programs.

The sport of rowing appeals to all ages with athletes as young as 10 years old and as old as 85+ participating. Another interesting demographic is the fact that the sport presently has more females involved than males. The ARC presently has approximately 360 full time members and

typically has over 400 learn-to-row members which often are Toronto residents with many coming from the surrounding neighbourhoods.

The ARC banquet facilities are also available 12 months of the year, 24 hours of the day and are a very significant source of revenue. Any impact on the ability of the ARC to generate revenues from the banquet facilities (especially during the construction period of the course) must be taken into consideration.

Although the ARC does not have proprietary ownership of the waterfront from Ontario Place to the Humber River, we depend upon it unlike any other Stakeholder for the economic viability of the Club. We have no option with respect to training somewhere else, be it outside the breakwall (like the neighbouring sailing clubs) or offering other types of programming (like Ontario Place and the Exhibition).

We provide you with this information in order to give you an idea of the magnitude of the impacts on our Club.

We will detail below our concerns and comments/suggestions. They can be generally categorized as follows: safety issues; growth of the sport; the economic viability of the Club and ensuring that we achieve Toronto's waterfront goals.

Context

The ARC was consulted by Paul Henderson in the summer of 2003 and mock-ups of the proposed multi-sport 2000 metre watercourse in the Western Beaches were shared with the Club. The Club expressed support for a 2000 metre multi-sport watercourse. The Club was not consulted during the Feasibility Study completed in the summer of 2004 by Mac Viro consulting, as the one phone call to our President (at the time coaching at the World Adaptive Rowing Championships in Spain) was not followed up. A member of the ARC Board, after several telephone calls through September and October 2004 was first allowed on November 8th, 2004 to view the Feasibility Study completed in September 2004. She was not allowed to make any copies of the Study. After reporting to the Board at the next meeting (November 15, 2004) it was agreed that the Club should write to the TWRC, and on November 26, 2004 a letter was sent to Mr. John Campbell of the TWRC. No reply was received to that letter.

The first offer to "participate" was the Stakeholder's Meeting on February 21st, 2005, **three months later**. At that point we asked for and have been provided with a copy of a September 2004 Feasibility Study which offered11 options to develop a multi-sport facility. We note that some of those Legacy proposals could be fully endorsed by the ARC, but, at the February 21st, 2005 meeting we were shown (not provided with) two new versions of the Dragon Boat course that were not part of the September 2004 Feasibility Study. While the Club was formally preparing a response to those two February 21st, 2005 designs, we were informed that a new design(s) would be presented at the EA Public Open House on March 10, 2005. At that time, we were shown one primary design and told that this was the preferred design. Again there was no documentation made available to us until March 17th, 2005. **The ARC is convinced that there**

is an acceptable solution, it does not believe that the March 10th, 2005 preferred option is acceptable.

The Argonaut Rowing Club's Position

1. The ARC fully supports Toronto hosting the 2006 World Club Crew Dragon Boat Championships.

2. ARC wishes to be fully involved in the planning for the watercourse and future proposal on the Western Beaches part of the waterfront.

3. We understand that the TWRC have just commenced a Marine Study of the entire waterfront that in theory would create an overall framework for future use of the waterfront. We believe that this study should take place before any piece meal proposals are considered. The ARC would like to see the Western Beaches' waterfront as vital, alive, and actively and safely shared by a number of water sports. To do this we need to form an Association with the other water-sport clubs (Boulevard Club, Toronto Sail and Canoe Club, and possibly Ontario Place and the Exhibition), along the lakeshore and develop a common position on a number of issues facing us. Ideally, a "water use study" similar to that undertaken by the Outer Harbour Sailing Federation in the Outer Harbour would take place prior to the introduction of any new uses. This Association would need to be involved with the management of the course after the event.

CONCERNS/COMMENTS

As noted above, to date the ARC has not been given an opportunity to provide meaningful input into choosing the location for a multi-sport facility in the Western Beaches. We have been told that the only proposal under consideration is a 500 metre, single purpose, dragon boat course at Ontario Place because "all they have is $23 million dollars" and 16 months to build **this facility**. We are therefore providing these comments while noting that the most important aspect of the course (the location) has apparently already been chosen without consultation from the Stakeholders.

To assist you in the review of our concerns/comments, we have categorized our issues into longer term concerns and immediate concerns.

LONG TERM CONCERNS

a) Safety of users of the water

Although there have been verbal commitments that no permanent facilities are contemplated as part of this EA proposal, the concern remains that building a 650 metre dragon boat course will be used as justification for building a clubhouse and permanent docks or moorings in public land which in turn will result in increased water-traffic between the ARC and Ontario Place. At present, water usage in that stretch of water is at capacity, between dragon boaters from Sunnyside and the Boulevard Club, cabin cruisers from Ontario Place, cruise ships from the Inner Harbour / the Islands, rowers and other

types of private water craft. Any increase in watercraft arising from the establishment of a permanent clubhouse, docks or moorings would almost certainly result in an increase in accidents and boat damage with potential for personal injury. For example, Adaptive (vision impaired, cerebral palsy, etc.) Rowers would no longer be able train in this stretch of the water because of the increased traffic. Ultimately, if safety could not be reasonably assured, adaptive rowing at the ARC might indeed cease. We will provide confirmation of this fact if requested.

It is the ARC's position that it is short-sighted and irresponsible if this EA proposal does not address the future use of this facility.

b) **Economic Viability of the ARC after the construction of the new course**

Any increase in traffic east of the ARC will have a deleterious effect on our ability to run programs such as Adaptive Rowing, Learn to Row and corporate events, as the area where these uses typically take place will become increasingly more dangerous to use. If the Club cannot provide these programs with a safe training facility, the ARC will not be able to offer these "money making" programs in the future. This will have serious consequences that can be easily documented if requested.

c) **Usability of the course**

Part of the Legacy being sought by the three levels of government is to increase the usability of the waterfront. Any increase in the traffic east of the ARC will seriously jeopardize the ability of rowers (competitive, National Team, Adaptive Team and Learn-to-Row) to train safely and effectively east of the Club. Establishing a 500 metre dragon boat course east of the rowing Club in what is today the safest and most useable part of the waterfront would sterilize upwards of 2000 metres of water (if you include the area within Ontario Place). We can provide documentation to this effect from present National Team rowers, former National Team rowers, Adaptive Team rowers and Club members if requested.

The ARC notes that it is somewhat misleading to suggest that creating a 650 metre basin increases the amount of flat water available. Our experience is that the water will be less usable (rougher) as there will be a greater surface area for the winds to be build up waves (making it rougher). In fact, if the distance between the existing break wall and the shore was reduced, the water would be better.

It is the ARC's position that it would be unfortunate if this EA proposal does not address the future use of the facility.

d) **Course Details:**

The March 10th, 2005 proposed location is not favourable to the ARC and severely limits the potential to be expanded to 1000 metres and precludes any expansion to 2000 metres. We encourage further examination of sites located closer to the Humber River. **We note that none of the existing stakeholders (ARC, TSCC, BC) would be directly impacted**

with a location west of the Boulevard Club. A significant advantage achieved with other locations on the Western Beaches is that parts of the breakwall that are in need of repair could be addressed through this proposal. Public access is at least as good as the Ontario Place site and more parking (directly beside the site) is available as well as restaurants and food kiosks and public washrooms. Also, from the limited details available to ARC, a 1000 metre and 2000 metre course would be possible if located nearer to the Humber River. The Legacy could be achieved which likely would be supported by all Stakeholders including the sports bodies.

It is the ARC's position that making a decision solely based on economics as has been clearly stated by the TWRC is not sufficient justification from an EA perspective and has resulted in a single purpose proposal that addresses no user groups needs.

ARC should be consulted with respect to the actual design of any course. We have the most experience with respect to the impacts of wind and wake on the usability of the course during the event and after the event. We note that comments have been made by the consultants with respect to "temporary/removable wave attenuation" structures. They will not survive in the long run. Any means to control wave action must be designed as a permanent solution.

Also a critical flaw with this process is the failure to provide details of the potential extension to 1000 metres. It is understood that 2000 metres is not contemplated at this site (Ontario Place) for amongst other reasons TSCC and BC impacts. It should be noted that the latest version of the dragon boat course (March 10th) does not present a future 1000 metre alignment.

The disposition of the cabin cruisers from Ontario Place is also important (see (a) above about safety). The stability of the shoreline may be affected by the wake from these boats if TWRC proceeds with a "no gap" breakwall (the March 10th preferred option) with no direct access to Lake Ontario from Ontario Place. This would force the cabin cruisers to proceed past the ARC to the "gap" in front of TSCC. We note that the latest plans do not show any gap for the cabin cruisers but, the supporting documents refer to moving the "gap" closer to the ARC in relation to where it is today. This will have to be carefully considered as it will run counter to increasing the usability of the course and will compromise safety.

We assume you do not require further documentation from us respecting the potential use of the facility in the future for world class events since we know that the Canoeing and Rowing governing bodies have informed you this will never be deemed a world class facility capable of handling international events such as the Olympics. In other words, a second watercourse would have to be provided in the future if those types of events are sought for the City.

e) **Remnant breakwall**

The breakwall from the ARC to the Humber River is significantly more dilapidated than the part from Ontario Place to the ARC. An objective of the Club, in concert with other waterfront users, is to encourage the repair of the remaining parts of the breakwall. We are disappointed that this has not been addressed.

As well, if dredging of the sand in the "narrows" could be arranged between the Humber River and the Palaise Royale this would be a significant benefit to all users. It would be safer and would truly increase usability of the waterfront by all groups. Ideally, TWRC would be able to justify this action as part of the preparation of facilities before the event for the competitors. We know that the BC and TSCC would fully support this proposal.

f) **Long Pond**

If it is determined that Long Pond (Centre Island) was the desired location for the Dragon Boat regatta, ARC would fully support any improvements to that facility. The City already owns/manages this facility and it is capable of handling this event and other events up to 1000 metres in length. The Federal, Provincial and municipal governments would be improving a facility presently used by dragon boaters, paddlers and rowers.

g) **Fish Habitat**

A part of this process that has received very little debate is the contemplated fish habitat. If the "restored habitat" is located outside of the new breakwall or sufficiently deep enough inside the breakwall that coach boat engines are not fouled than ARC would not be impacted. If some of the fish habitat is to be constructed within the breakwall, ARC needs to be provided with details in order to offer input.

h) **Course Ownership/Management**

TWRC has noted that the course will not be "theirs" after the event and there is no indication who will "own/manage" this facility especially from a safety and maintenance perspective. TWRC must confirm/address who will be responsible for the course after the event. As ARC is aware, no one wants to take ownership of the existing breakwall so it is not a forgone conclusion that the City or other public body will maintain the new facility in the future.

Also, given that this is a single purpose facility that will only appeal to groups putting on dragon boat events, who will control how often events are staged in this area? When events are taking place it sterilizes the use of the facility by others. It is one thing if the facility is built for one event and it is entirely a different matter if dragon boat events are scheduled weekly.

i) **Ontario Place**

Given that the preferred option is adjacent to Ontario Place it is short sighted to consider and comment on this EA proposal without being provided an opportunity to discuss Ontario Place's long term goals in relation to this dragon boat facility.

IMMEDIATE CONCERNS

Construction period

Details of the construction are critical. To date, very little has been provided. If for example, construction takes place in the winter, the ARC would likely have very little concern with the impact on training. However, we would still have to determine the impact on ARC's ability to rent the banquet facilities in the Club.

Also relevant, given the present state of the ARC shoreline, commitments to preserve the less than stable shoreline should be sought. Massive equipment can create a large wake which would accelerate the deterioration of our waterfront structures.

It is the Argonaut Rowing Club's position that the proposal as presented on March 10th, 2005 will not provide an effective multi-sport facility for use by a number of water sports, and will not result in a significant legacy for the Toronto waterfront. It is a single sport facility for a single purpose with no clear plan for on-going management. Given that this proposal involves $23 million of public money (and no private money) on public land it is likely that it will jeopardize Toronto's ability to attract funding for a facility capable of hosting World Championships in Rowing, Canoe/Kayak or Dragon Boating at another location in the foreseeable future.

We look forward to your response and hope that the ability to provide meaningful input is provided to all Stakeholder's, since to date there appears to be limited support from the user groups and no support from the National Sport bodies.

If you have any questions, we may reached at the number noted above.

Yours truly,

Robert Blunt

cc.: John Campbell, TWRC

Mayor and all Members of Council (City of Toronto)

John Carmichael, President, Rowing Canada Aviron

Fenwick Bonnell, President, Argonaut Rowing Club

41

[redacted]

04/04/2005 04:28 PM

To ngaffney@trca.on.ca
cc
bcc
Subject Dear TWRC and City of Toronto...Please don't ask experts for opinions and then ignore what they have to say!

History: This message has been forwarded.

Dear TWRC and City of Toronto...Please don't ask experts for opinions and then ignore what they have to say!

Thank you for your "genuine" interest in the publics opinion but on behalf of the public, we are all concerned that the TWRC and the City of Toronto are ignoring the views of the majority of the public and the **true** experts of this project when they make plans to spend millions of tax payer's dollars for a dragon boat course that will essentially be used once.

The **true** experts have already told the TWRC and the City that the project is not justified unless it can facilitate rowing, sprint canoe / kayak as well as dragon boating. In order to to so, the course would have to be a minimum of 2000 meters for rowing and 1000 meters for sprint canoe and kayak. (Interesting that the later sports are Canada's leading medal contenders at the Olympics yet the last to be considered in this project). Why spend so much money on one single national championship for dragon boating when instead, Toronto could host a variety of city, regional, provincial, national and international level races in **all three** sports?

We, the public, realize that the promise to extend the course at a later date on a different budget is irresponsible because history has shown that projects like this are never realized. If there is no possibility to build a fully functional 3 sport course on the current project budget, then **don't waste our tax money** on a mediocre facility that few will benefit from. We would rather the race course project be cancelled and the money be spent responsibly on something else, than to see millions of dollars dumped (literally) into a useless facility.

If the TWRC and the City go through with the project for only 650 meters of race course, they are ignoring the publics interests simply for the sake of saying they built *something* with the tax money they were giving for the project. That is project management, but it is not effective project management.

If you are truly a Waterfront Specialist, I hope you can portray this reality to the powers that be. If our politicians are true to the public, they will listen to what we have to say, rather than make irrational decisions that do more to justify their own existence than to serve the citizens of Toronto.

Thank you.

[redacted]

(Current sprint canoe/kayaker with Balmy Beach Canoe Club, past national / international level oarsman, part-time dragon boater)

42

[redacted]

04/04/2005 04:44 PM

To <ngaffney@trca.on.ca>

cc

bcc

Subject Western Beaches Watercourse

History: This message has been forwarded.

Hello,

Firstly, I would like to say thank you for allowing me the opportunity to give my opinion on the proposal. I think the idea of a permanent race course is fantastic the unfortunate thing is that it is entirely in the wrong location. I understand that the area partially exists already, however, the length of the course is too short for other water races, such as rowing (needs at least 2,000m,) kayaking and canoeing (need about 1,500m for turning, etc.)

My children belong to the Balmy Beach Canoe Club. Their "paddling section" happens to have over 100 members. My children along with many others love this sport and have for the past six summers attended the programmes offered through the club. Which is celebrating its 100th anniversary this year. They train them to not only enjoy the sport they teach them how to compete. My daughter has had, for the past four years, the opportunity to compete at the Canadian Canoe Championships, my son has had this same opportunity for the past two. The wonderful part of this sport is that it is in a "neighbourhood," not in an area that is barely accessible, unless you have a car. They bike to the bay with their friends, where they converge for a day filled with exercise and fun.

The Balmy Beach Canoe Club used to paddle on Lake Ontario, however, due the waves, etc. they were advised that this was no longer possible, so around nine/ten years ago they had to move the paddling portion of the club to Coatsworth Channel/Ashbridges Bay - which from my understanding will be closed in a few years. The better choice for a permanent race course to me would be along the shores of Lake Ontario from Donald Summerville Pool eastward toward The Balmy Beach Club a natural break wall made from large boulders, as have already been put at the beach would facilitate the course and reduce the risk of waves washing out the boats. I know that this may be an impossible and costly endeavour but it's one that service the needs of dragonboaters, rowers and paddlers alike. The boardwalk/beach provide plenty of viewing space, plus the neighbourhood businesses would benefit from increased business, plus it is easily accessed by the T.T.C.

Again, I thank you for the opportunity to have a say in this matter,

Yours truly,

[redacted]

43

[redacted]

04/06/2005 11:03 AM

To ngaffney@trca.on.ca
cc
bcc
Subject

Hi, I'm writing you regarding the western beaches waterfront facility project. If you are building a 650m dragon boat course wouldn't it be great if it was possible to extend the course to 1000m so sprint kayaking and canoing events could be held there, or 2000m which would allow for rowing regattas as well. If toronto makes a bid for another summer olympics, we have no place to hold these events. The only city canoe and kayak club in the entire country is located at Ashbridges Bay, a 550 m long bay that is not even considered safe to paddle in due to extremely elevated levels of e-coli. Canada has a strong paddling community and some of the best athletes in the world, Canada won most of its medals in flatwater paddling at the last olympics, and it would be great for the city if we could hold national events in Toronto.
Thanks for your time

[redacted]

44

[redacted]

04/06/2005 01:26 PM

To "Nancy Gaffney" [redacted]
cc
bcc
Subject Western Beaches Watercourse

Hi Nancy,
Thanks again for the excellent job you're doing with this project and for responding to everone's concerns.
You mentioned to me afterwards about your concern to creatively attend, within time constraints, to the design and configuration of the breakwater. Many great ideas churn around inside and seemingly appear instantaneously just when needed.
I'd like to suggest you look at my website www.talesoftheearth.com The home page alone will show you something possible with ordinary fieldstone. Just when I was ready to build it, the idea came forth. (*Built it, and they will come,* said the movie).
I would be very happy to work with you to help configure the seawall, and it may come as a surprise that a geomorphologically inspired work will be economically justified because natural base conditions upon which it sits suggest such a configuration.

[redacted]
416-469-9646

[redacted]

45

[redacted]om>

04/06/2005 01:33 PM

To <ngaffney@trca.on.ca>

cc

bcc

Subject Western Beaches

Good meeting last night and all you folks did a good job on preparation as well as presentation. My interest is as a public citizen although I am a Member of the Boulevard Club and I would love to see the present breakwall replaced sooner than later. I understand that is not in this project. However a 4 foot height increase will, I think, have some negative impact on the "human " habitat's view of the lake from the shore, with all do respect to fish etc. I would hope that the height increase could be kept to an absolute minimum.

In terms of "vision" you are preparing an accessible piece of waterfront for "summer" use which is great. I wonder if there has been any consideration given to enhancing or providing for winter use of this space. Ottawa's Rideau Canal ice skating comes to mind as an excellent example of maximizing use to include our winter climate. Ice sailing might be another. It seems a shame to have all that space so dormant for 7 monrths of every year and if there was a way to make the space useable in winter maybe more money could be found now. I did not want to raise this last night and rain on the rowers/paddlers parade.

Finally, please tell Paul Henderson that bull rushes stink and we don't need them along the beautiful shoreline that some of us use!! Thanks.

[redacted]

46

TALES
of the EARTH

rcvd 03/16/05
WMD

March 11, 2005

Ms. Nancy Gaffney
Toronto Region Conservation Authority
5 Shoreham Drive
Toronto, On M3N 1S4

RE: Western Beaches Watercourse

Dear Nancy:

I appreciate the opportunity to speak at the Public Information meeting last night. I identified myself as a dragon boater who paddled at three World Championships. Years ago, for several years, I was the person responsible for all environmental matters at county level government in Ithaca, NY, including my position as director of the 50-person county environmental advisory council – an extremely politically active and brilliant group, many associated with Cornell University. Much of my work involved stream dynamics and management.

Looking at the preliminary designs for the wall, I was reminded of years past when the Army Corps of Engineers would be called into a community to alleviate flooding. Their common solution of channelizing streams within linear concrete banks was found over the years to merely transfer problems downstream, and subsequently have been torn out and replaced with watercourses paying proper attention to geomorphology of stream dynamics.

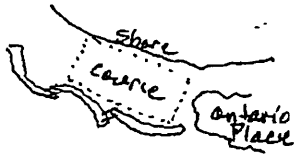
As a sustainable environmental designer, I have problems with constructing straight walls along shorelines. They create additional unnatural problems with sedimentation and scouring in places you don't want. While they may satisfy economic and social needs, they don't responsibly satisfy environmental patterns.

I wish to make the following suggestions:

1. Model water current flow and sedimentation patterns expected with the alternatives designs. You know that presently two locations within the existing breakwater are heavily silted. First, deposition near the Humber occurring as the faster moving river drops its load in the delta configuration when it meets the relatively slower waters of Lake Ontario. Deposition volumes will only increase as more development occurs upstream.

The second location east of Sunnyside is shallow, perhaps because there is no place for naturally transported sediment to be carried after arriving from nearby breaks of the breakwall. There is insufficient water flow to carry much of anything anyway. And with the new outflow, there will be additional sedimentation, as well. I don't know if you know the new patterns emerging from new walls.

2. Consider a series of alternating intersecting curved "walls" with large radii eventually replacing the existing walls, enclosing the minimum width required for the course. Design openings to allow for sufficient flow velocity required for sediment movement, while also meeting course design parameters.



66 Millbrook Crescent
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Landscape Architecture
Environmental Design
Meditation Gardens

Telephone: (416) 469-9646
E-mail: kailas@astral.magic.ca
Web site: www.talesoftheearth.com

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3. Conceptualize the course as a "backbay" behind the "walls" and encourage naturalized littoral sedimentation accumulation on the lakeside. This may suggest other, more amenable locations for stage 1 of this project.

4. Make it accessible and safe for people to walk and sit.

5. If this is to serve as an international level course, look at other World Champion sites, such as Rome and Shanghai, their location and design relative to existing water bodies, and their provision for 1000 and 2000 meter races, standard for these events.

Having some understanding of both environmental and dragonboat concerns I would appreciate being on a list of those contacted for future meetings and would be very happy to serve on an advisory board.

This is an exciting opportunity for use of the waterfront; it is important to get it right. While it must be staged, it need not be piecemeal. Again, thank for the opportunity to respond to the proposal.

Sincerely,

Dennis A. Winters, OALA ASLA

47

"Blunt, Robert" <RBlunt@goodmancarr.com >

04/08/2005 12:47 PM

To "Nancy Gaffney" <NGaffney@trca.on.ca>

cc <kpitre@thelonsdalegroup.ca>, "Judy Sutcliffe" <jsutcliffe@sympatico.ca>, "Fenwick Bonnell" <fenwick@powellandbonnell.com>,

bcc

Subject Engineering Details

Nancy,

I am sure that the wave testing that has been done in Ottawa has reviewed the "open end" concept. We are **very concerned** about the usability/safety of the course during the event and after if either end is left open. Please provide whatever information is available so that we can comment (and our engineer) on this aspect prior to April 22nd. By the way, just as important to the ARC is our concern about the long term impact on the stability of shore structures if either end is left open.

The ARC (ORA and RCA) will not be convinced that a "temporary" solution will work as well in the short or long run as a "permanent" answer. Especially, given the fact that no one wants to own the existing breakwall, no one is jumping up to maintain this breakwall in the future, there are issues of liability, control, design, storage while the structure is not in use, there is no timeframe for a potential extension of the course, etc. etc. etc.

I left a message with Karen Pitre yesterday to discuss this matter but, I have not heard back from her yet.

If TWRC are looking to clear as many issues off the table as possible, I strongly suggest that confirming that a "permanent link" is proposed will please all the paddling sports.

Robert W. Blunt
Land Use Planner
416.595.2462 (t)
416.595.0567 (f)

48

O AND REGION
Conservation
for The Living City

April 12, 2005

BY COURIER

Request for information via telephone.
AP.

[redacted]

Dear Mr. Thomas:

Re: Western Beaches Watercourse Facility – Request for Information

Please find enclosed copies of the presentation boards from the Western Beaches Watercourse Facility Public Information Centre #1 held on March 10, 2005 and #2 held on April 5, 2005. Additionally, please find attached the Project Description and Scoping Report prepared for the Canadian Environmental Assessment Agency. If you require any additional information or have any questions related to the material provided, please do not hesitate to contact the undersigned.

Yours truly,

A Phillips.

for Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
Tel. (416) 661 6600, ext. 5313
Fax. (416) 661-6898
Email: ngaffney@trca.on.ca

Encl.

49

ROWONTARIO

1185 Eglinton Avenue East, Suite 405
Toronto, Ontario M3C 3C6
Telephone: 416-426-7002
Fax: 416-426-7309
E-mail: admin@rowontario.ca
www.rowontario.ca

April 21, 2005

Ms. Nancy Gaffney
Waterfront Specialist
Toronto and Region Conservation Authority
5 Shoreham Dr.
Downsview, ON
M3N 1S4

rcvd 04122105

Dear Ms. Gaffney,

We wish to thank TWRC and TRCA for inviting representatives from the sport of rowing to participate in the ongoing planning of a regatta course along the western Toronto waterfront. This consultative process has led to an improvement in the proposed location of the venue within the project's significant constraints.

Whereas the proposed 650m course length will do little to enhance Toronto's capacity to host major rowing competitions, we appreciate the significance of the relocation in improving the *potential* for extension to the 2000m international rowing standard.

As the governing body for rowing in Ontario, we are interested in maintaining existing opportunities for rowing participation in the Province. In light of this, we have two main concerns with the current proposal:

3. **The new breakwall must be permanently linked to the old breakwall.** The creation of large gaps between the walls directly in front of the Argonaut Rowing Club will severely compromise its ability to offer safer and effective rowing programs. As one of Ontario's oldest and largest rowing clubs, a substantial decline in its useable water will negatively affect the quality and availability of rowing programs in Canada's largest city.

4. **The rowing community must play an important role in the future management of the new course.** The new course will attract recreational traffic to the water directly in front of the Argonaut Rowing Club. Again, in order to ensure safer and effective recreation opportunities for members of one of Ontario's largest rowing clubs, the rowing community must have major input into the flow of boats through the area.

Up to now, we have been heartened by the TWRC's willingness to listen and respond to the concerns of rowers. Its responsiveness to the two above points will determine the extent of the rowing community's ongoing support for the new course.

Yours truly,

George Barkwell, CA, CMC
President

cc: Hon. James Bradley, Minister of Tourism & Recreation
Hon. Gerard Kennedy, MPP, Parkdale-High Park
David Miller, Mayor of Toronto
Sylvia Watson, Councillor

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ROWING CANADA AVIRON
www.rowingcanada.org

April 21, 2005

Ms. Nancy Gaffney
Toronto and Region Conservation
5 Shoreham Drive
Downsview, ON M3K 1S4

Dear Ms. Gaffney,

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1. **The new breakwall must be permanently linked to the old breakwall.** The creation of large gaps between the walls directly in front of the Argonaut Rowing Club will severely compromise its ability to offer safer and effective rowing programs. As one of Ontario's oldest and largest rowing clubs, a substantial decline in its useable water will negatively affect the quality and availability of rowing programs in Canada's largest city.

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Up to now, we have been heartened by the TWRC's willingness to listen and respond to the concerns of rowers. Its responsiveness to the two above points will determine the extent of the rowing community's ongoing support for the new course.

Yours truly,

John Carmichael
President
Rowing Canada Aviron

201 - 1234 Esquimalt Rd. - Victoria, BC V9A 3N8 - Tel/tél: (250) 361-4222 or/ou 1-877-RCA-GROW - Fax/téléc: (250) 361-4211 - E-mail/courriel: rca@rowingcanada.org

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ROWING CANADA AVIRON
www.rowingcanada.org

March 10, 2005

Mr. John Tracogna
Director, Toronto International
EDCT, Tourism Division
City of Toronto
100 Queen Street West
City Hall, 9th Floor, East Tower
Toronto, Ontario M5H 2N2

Dear Mr. Tracogna,

I am writing to you as a stakeholder in the proposed new Western Beaches Watercourse, and in response to the request for input from TWRC. There are several points that we would like to bring forward.

1. Rowing Canada Aviron supports the development of a multi-sport Watercourse within the GTA. We believe this development is long overdue and, if designed and built to the proper FISA standards, will enable us to attract numerous regattas to the city while enhancing the city economically and culturally.

2. We are aware of the significance of the three levels of government coming together on a project for the Toronto Waterfront—we understand how long this has been in discussions and we are very pleased that the three levels of government have committed $23M to a project to support water-sports on the Waterfront.

3. We have been advised by TWRC that this Watercourse is not being built as a rowing facility and, therefore, will not enable us to attract these events. While regrettable, we understand the cost constraints of building a 2000 meter course in this location. It is important that this Watercourse is NOT identified as a rowing course as this is misleading.

4. Rowers support event hosting and welcome an international dragon boat Championship. We understand from *Dragon Boat Canada* that the event in August, 2006 may be held in a number of venues in Toronto. To build a course that has limited use and that cannot be used by other sports is a missed opportunity. This would be ameliorated if there were a plan, timetable and budget for its extension to a multi-sport facility.

201 - 1234 Esquimalt Rd. - Victoria, BC V9A 3N8 - Tel/tél: (250) 361-4222 or/ou 1-877-RCA-GROW - Fax/télec: (250) 361-4211 - E-mail/courriel: rca@rowingcanada.org
Member of F.I.S.A., Canadian Olympic Committee/Membre de F.I.S.A., Comité Olympique Canadienne

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5. Our primary concern is not with the event—our concern is with the use of the facility after the event. We have three concerns:
   - Safety: The increased boat traffic that could result if a dragon-boat clubhouse with docks is installed in *Marilyn Bell Park* will result in a huge impact on the safety of dragon-boaters, canoeists and rowers. There are cabin-cruisers using the marina in *Ontario Place*. Collisions will happen and when collisions occur on water, there is potential for serious consequences.
   - Process: Where are the sport governing bodies in the design of the facility? Sport governing bodies (SGBs) bring order, technical knowledge, accountability, structure, and certainty. None of the three SGBs with a direct interest in this facility--*Dragon-Boat Canada*, *Rowing Canada Aviron* and the *Canadian Canoe Association* have been invited to participate in the design of this watercourse beyond being permitted a voice at sessions such as this. We want to see the SGBs have a place at the table.
   - The *Argonaut Rowing Club*, as a member club of *Rowing Canada Aviron*, is the most effected by this proposed project. We believe it is vital to include their representatives in the planning process to ensure that the final result provides a legacy for rowing in Toronto, after August, 2006.

6. The only potential advantage to the rowing community of this initiative is the increase in rowable flat water in the area. The plans we have seen to date do not clearly indicate whether there will be more, less, or the same amount of rowable flat water after the course is constructed. Our support for this project will be determined by the resolution of this variable.

Thank you for the opportunity to comment.

John B. W. Carmichael
President
Rowing Canada Aviron

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Toronto Sailing & Canoe Club
1391 LAKESHORE BLVD. WEST • TORONTO, ONTARIO • M6K 3C1

April 22, 2004

Nancy Gaffney, B.Sc.
Waterfront Specialist
Watershed Management Division
(416) 661 6600 ext. 5313
(416) 661 6898 Fax
ngaffney@trca.on.ca

Dear Nancy,

In the recent redesign of the watercourse facility, the Toronto Sailing & Canoe Club seems to have been left out of the negotiations involving the relocation of the breakwall component. As a stakeholder that is losing its ability to use the waterfront by these revisions I wanted to set in writing some of the concerns and recommendations of the TS&CC.

We ask that:

A) **The west end of the new course wall begins 190 metres west of the current proposed location end (along the proposed expansion path). This should be an extension or could be an actual movement of the wall.**

B) **On the break wall to be removed, the existing concrete caps be salvaged and used to replace the failing parts of the break wall in front of the beach area west of the TSCC. This would allow us to recover moorings that have been lost.**

C) **The TS&CC be permitted to moor its members' boats along the inside of the new wall when a major regatta is not in progress and be permitted to mount fixtures against the wall to permit such moorings. TS&CC can moor the boats in alternate than perpendicular moorings to reduce impact on course operation.**

D) **The west end of the wall where it meets the existing break wall not be completely closed off. During the times the Watercourse is unused competitively, mooring against the wall is appropriate and reasonable access needs to be allowed.**

We enclose a map showing how these changes can be accomplished.

The purpose of the new wall:

The present break wall is what makes recreational paddling and sailing possible. Impassible gaps are appearing in it as it falls into the lake. The new wall is a chance to fix that and in addition improve the level of protection from the lake. That opportunity is being lost.

Our club suggests that the break wall project is best planned as a long-term opportunity to enhance all of the recreational boating activity in Humber Bay rather than as a venue for one three day event. Before boating can be enhanced however, it must be preserved. That wall is failing, and there is no plan apart from the construction of this wall, to replace or even repair it.

The need to fix the wall is a major reason that three levels of government have chosen to back the project. We were stunned to find that this purpose was unfulfilled in the first proposed wall location and was not a significant factor in choosing the current proposed location.

The existing break wall is disappearing in the centre, between TS&CC and the Boulevard Club. Athletes who need to pass along the length of the wall, such as dragon boaters, rowers and canoeists, are increasingly unable to do so. These are the very sports supposed to be served by the new course. One of consequences of the widening gaps is that the new boat course will usually be inaccessible to boat clubs located on the west side of the wall breaches. Almost all of the dragon boat fleet, for example, sails from Sunnyside

While it was heartening to hear that the Toronto Conservation Authority is considering repairing the wall during the new recreational boating course project, such consideration falls short of a commitment. We feel that such repairs should be an essential precondition of building the new course. The new facility will be of most use, to the most people, for the longest time, if it is part of a longer, intact, break wall system. Fortunately, the cost of doing the necessary break wall repairs with the current project would be minimal, as the necessary equipment would be there already and the wall caps being removed can be re-used.

As we have previously advised you, TS&CC is very concerned by the breaches appearing in the wall in front of us. The existence of our 125-year-old club depends upon continued shelter provided to our moorings by a break wall. The disappearing break wall has already rendered many moorings unusable. More sections fall into the lake each year. A combination of careful location of the new wall and repair of the old wall are needed for us to continue. The salvaging of the existing concrete caps on the break wall can be moved into shallower water sufficient for us to use as a second mini-break wall that would allow the club to endure while the front remaining wall collapses, especially if the time horizon for full repair and replacement of the break wall is distant.

Location of the new wall:

Even apart from the issues raised by the vanishing wall sections, the new wall will provide much better shelter than the old wall ever has. For these reasons, we continue to request that the Western end of the new break wall be in front of the Toronto Sailing & Canoe Club. The ideal location from club's point of view would shelter the centre entrance to the club from south and southeast winds. The western end of the wall would be off the western side of the entrance. Our wave data show that no end cap on the wall is necessary as west winds generate very small waves, winds that could do so (30+knots) are so high as to prevent the use of the course even if the end were capped.

The additional shelter would permit us to build docks immediately to the east of the club. The existence of docks would make a major difference to the financial well being of the club. The docks would not intrude upon the proposed racecourse.

We have not heard a complete explanation of what consideration has been given to our proposed location, and what factors militate against it. What if any would be the cost of each proposed location? For example, if the depth is too great at 132 metres offshore, the wall angle could be rotated slightly to reduce the depth. The 132 metre width could be reduced to as little as 110 metre width, as was done when the depth was reduced to 2.5 metres from 3.5 metres to permit shifting the wall west to the presently proposed location. This was apparently accomplished with one phone call. Further, while we appreciate the intricacies of very tight deadlines, no less than fifteen approval processes and lots of public consultations, the entire plan is being devised with no specific cost figures for the various alternatives. Accordingly, we are concerned that the wall configuration, which the situation requires, is being rejected based upon hypothetical notions of cost and overstated course width standards.

The benefits of the wall location we propose are of major importance to our club, and its potential growth prospects. For that reason we are anxious to see that every possible consideration is given to making the watercourse facility a benefit to sailing.

Replacement moorings:

As mentioned above, the loss of the current break wall is depriving TS&CC of moorings. Approximately 8 or 9 club existing TS&CC moorings are located in the new race course as presently contemplated. Fortunately, the new wall will provide even better shelter for our moorings then the existing break wall. We would be pleased to accommodate the new course by moving our moorings to the inner face of the new wall. The sloping design of the wall permits the moorings to be installed with minimal intrusion on the inner channel. Assuming our longest boat is 11 metres long, and given the slope of the wall, moorings boats perpendicularly to the wall would consume only approximately 5 metres of space inside the wall.

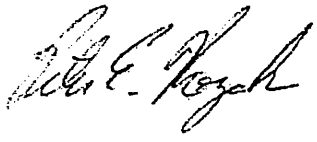
Given that there is over 132 metre of space planned, the allocation of 5 metres of space to preserve sailing in the Bay is entirely reasonable. Furthermore, it is clear that such large events will occur only once every few years, whereas sailing and sailboat mooring are daily activities in the summer months.

In the unusual event that the boats and moorings need to be temporarily removed to facilitate an event, such removal could be readily accomplished.

Conclusion

In summary, TS&CC requests that repairs to the old wall be made a necessary part of the project, that salvaged break wall caps be used to further help our club defend against the inevitable decline of the existing wall, that the wall begin 190 metres to the west, and that TS&CC be permitted to moor its boats adjacent to the new wall. Without these things the wall will be an enormous disappointment to the sailing community, and they can be accomplished without compromising any other goal of the project. Let us take the effort needed to get the most out of the taxpayer's $23 million dollar wall. Any mistakes made now will be cast in stone for generations.

Yours truly.



Peter E. Kozak.
Commodore TS&CC

Cc. David Allsebrook,
Past Commodore TS&CC

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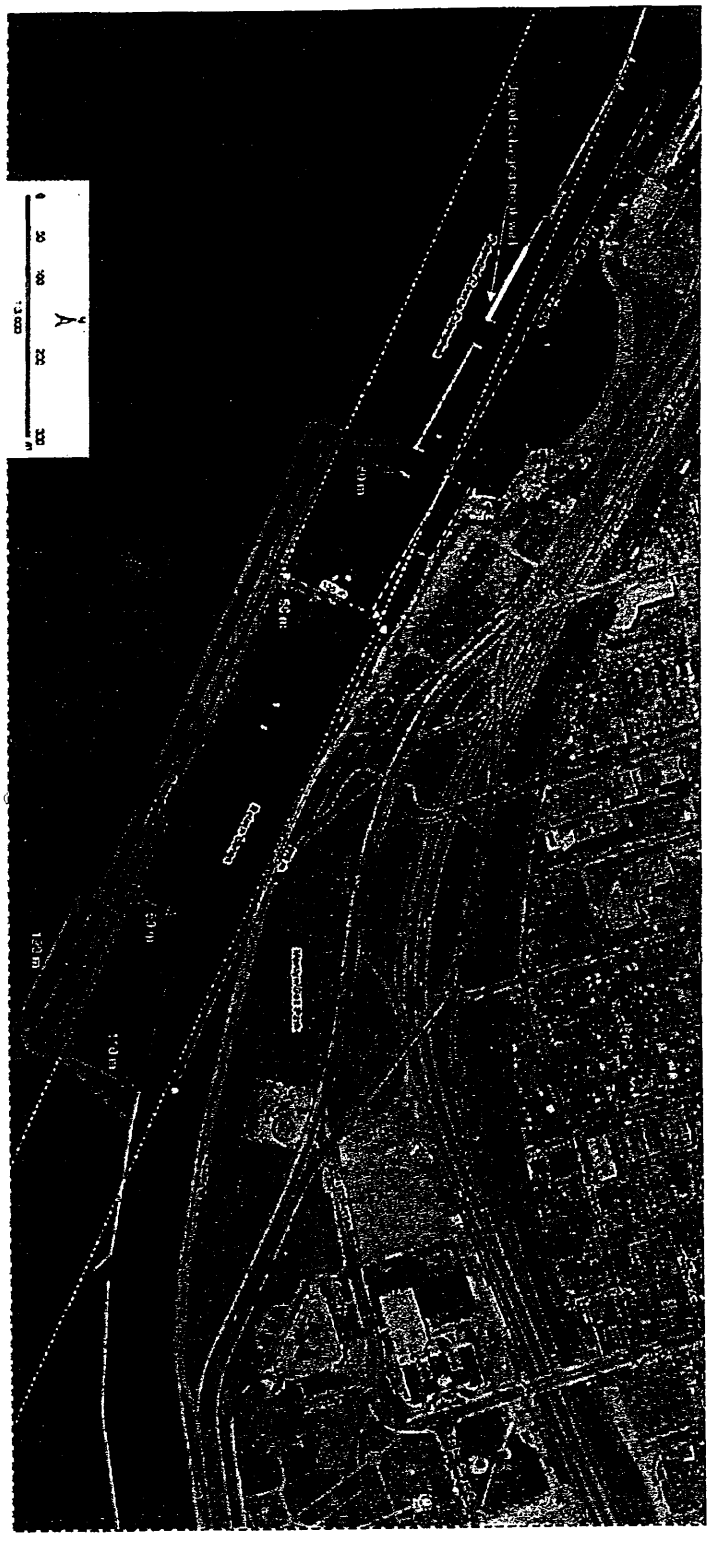

TS&CC requested improvements to new break wall

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"Karen Pitre" <kpitre@thelonsdalegroup.ca>

04/27/2005 08:27 AM

To "Malcolm MacKay" <Malcolm.MacKay@uma.aecom.com>, "Nancy Gaffney" <ngaffney@trca.on.ca>, "Alan Winter" <awinter@macviro.com>, "Mark Kolberg"

cc <p.kozak@sympatico.ca>

bcc

Subject FW: Watercourse location and cap design

Peter,

Thanks for your email and I will raise it today at our meeting. We will be in touch with you shortly. I have not received the letter from the TS&CC but I did speak with Dave and am aware of your issues.

Karen

-----Original Message-----
From: Peter E. Kozak [mailto:p.kozak@sympatico.ca]
Sent: Tuesday, April 26, 2005 4:19 PM
To: Kpitre@Thelonsdalegroup. Ca
Subject: Watercourse location and cap design

Hi Karen,

Dave Allesbrook let me know that I could contact Mark Kohlberg about some of the break wall details. (I assume you received our formal letter last week with comments and I am aware that Paul Hendersen has directly contacted you about some of our issues).

Amongst many items of interest to the TS&CC is the wall length (or more accurately where the wall starts) and the nature of the western end of the watercourse closure. We understand that the eastern end must be closed off and this is substantiated by the information you gathered in the feasibility study. We disagree that the same evidence (as well as our experience) show that the western end of the course must also be completely sealed.

So I would like to take up your offer for direct discussion with the engineer aligning and locating the details of the watercourse. I can meet face to face during afternoon hours if that is more convenient than evenings or weekends. My phone number is 905-891-2596 and I am usually contactable from 1:00PM on wards.

Thanks,

:) Peter Kozak
TS&CC Commodore

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[redacted]

rcvd prior to 04/22/05

Nancy Gaffney
Toronto Region Conservation Authority
5 Shoreham Drive
Toronto ON M3N 1S4

Re: Western Beaches Watercourse Facility

I am concerned that the Western Beaches Watercourse Facility is being planned in undue haste and that therefore considerations for sustainability, the environment, urban design, the creation of spectacular parks and other matters are being set aside.

In April 2004, TWRC published a document entitled Sustainability Framework. On Page 1-1 it states, "Although [The Sustainability Framework] is a draft document that will undergo extensive consultation before it is finalized, its goal is clear: to ensure that sustainability principles are integrated into all facets of TWRC management, operations and decision-making..."

This statement would presumably apply to the proposed Western Beaches Watercourse.

The Sustainability Framework goes on to make statements such as the following:

- Balance and integrate competing objectives through creative new ways of doing things
- The most widely cited definition is that sustainability is about meeting the needs of people today without jeopardizing the flexibility of future generations to meet their needs.
- Another very simple definition is do no harm now or in the future.
- It is widely agreed that development is not moving in the direction of sustainability unless it is characterized by achieving exemplar standards of functional and beautiful urban design.
- "... in place of an uneasy compromise among community objectives or a partial achievement of desired outcomes, a sustainability approach seeks to maximize community goals through purposeful integration, coordination, combination, and reconciliation.

The Sustainability Framework also states that TWRC's work program includes an alignment, by August 2004, of existing projects with the Sustainability Framework.

Finally, the Sustainability Framework establishes the following goal:

"Greatly enhance the environmental integrity of the Toronto waterfront."

Based on the comments of the proponents and documentation that was available at the meetings of March 10, 2005 and April 5, 2005, it appears the Western Beaches Watercourse Facility will not adhere either to the letter or the spirit of the Sustainability Framework.

It will apparently not achieve exemplar standards of functional and beautiful urban design. Instead, it appears the project will consist of little more than a utilitarian pile of rocks.

While it is widely acknowledged that the health of the aquatic environment requires that artificial hard edges be replaced with softer edges including aquatic plant communities, this project appears to introduce a new hard edge near the shore. It is also located in such a way as to seriously impair the ability of future generations to ameliorate the existing hard edge at the shore of Marilyn Bell Park.

In other words, the project will do harm now and in the future and it will jeopardize the flexibility of future generations to meet their need to improve the aquatic environment along the shore of Marilyn Bell Park.

It appears that at best, the project will achieve an uneasy compromise among community objectives. There is nothing in the process that could be characterized as purposeful integration, coordination, combination and reconciliation.

The sense is that the project is being rammed through to meet an impossible short-term deadline. Environmental concern seems to consist of nothing more than to "get through", to use the words of the proponent, the minimal requirements of a Municipal Class Environmental Assessment.

Recommendations:

That TWRC and TRCA commit to ensuring that the Western Beaches Watercourse adheres to the principles and objectives set out in TWRC's draft Sustainability Framework dated April 2004.

That TWRC and TRCA commit to ensuring that the Western Beaches Watercourse contributes to the goal set out on Page 3-51 of the Sustainability Framework to greatly enhance the environmental integrity of the Toronto waterfront.

That TWRC and TRCA commit to ensuring that the Western Beaches Watercourse contributes to the objectives set out on Page 3-53 of the Sustainability Framework and

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that the strategies and actions described on Page 3-53 be incorporated into the implementation of the project.

That the breakwater structure be moved further from the shore in order to provide substantial space to allow future environmental amelioration of the existing shore and to allow sufficient space on and adjacent to the new structure for plant and animal communities to become established consistent with the goal, objectives, strategies and actions set out on Pages 3-51 through 3-53 of the Sustainability Framework.

Respectfully submitted,

[redacted]

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Nancy Gaffney
Toronto Region Conservation Authority
5 Shoreham Drive
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Respectfully submitted,

[redacted]

Appendix E

PIC No. 1 Display Materials and Presentation Slides

Welcome to the Western Beaches Watercourse Coordinated EA Public Information Centre #1

March 10, 2005

- Please sign in on the sheet provided so that we will have a record of your attendance. Then feel free to walk around and view the displays.

- **A presentation will commence at 7:00 p.m.**

- If you have any questions, the Project Team Members will be pleased to discuss them with you.

- Comment sheets are provided for those who wish to provide their comments in writing. Please place your completed comment sheets in the Comment Box or mail/fax them to Nancy Gaffney (contact information below) by **March 31, 2005**.

- Thank-you for your involvement in this project.

- For additional information, please contact the following Project Team Member:

Nancy Gaffney
Toronto Region Conservation Authority
5 Shoreham Drive
Toronto, ON M3N 1S4
Tel: (416) 661-6600 Ext. 5313
Fax: (416) 667-6278
E-mail: ngaffney@trca.on.ca

Project History

- The City of Toronto has been selected as the host city for the International Dragon Boat Federation (IDBF) Club Crew World Championship (CCWC) in 2006.

- There were three conditions attached to the City of Toronto bid award:

  1. The award is conditional on the City building a new public access watercourse facility at the Western Beaches, just west of Ontario Place.

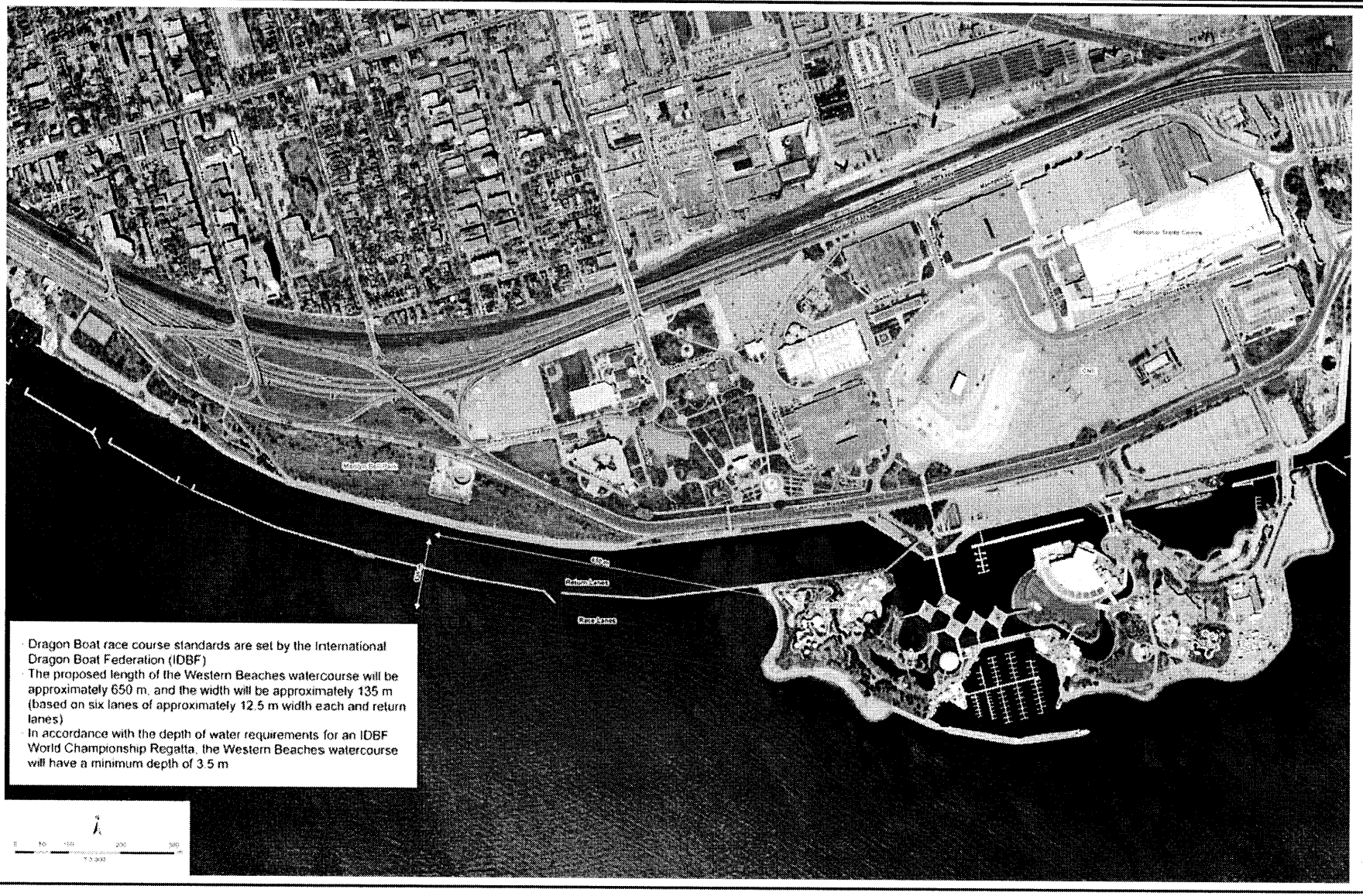
  2. The new venue must be ready for use before June 1, 2006.

  3. The federal government's commitment for funding be in-place by September 30, 2004. (Complete)

- To ensure that the City could meet the first two conditions, the Toronto Waterfront Revitalization Corporation (TWRC) prepared a study entitled "Dragon Boat Course Feasibility Study - Final Report" in September of 2004.

- The Feasibility Study concluded that the watercourse could be built on time with the available funding and the project was started.

The New Western Beaches Watercourse



- Dragon Boat race course standards are set by the International Dragon Boat Federation (IDBF)
- The proposed length of the Western Beaches watercourse will be approximately 650 m, and the width will be approximately 135 m (based on six lanes of approximately 12.5 m width each and return lanes)
- In accordance with the depth of water requirements for an IDBF World Championship Regatta, the Western Beaches watercourse will have a minimum depth of 3.5 m

Requirements for the New Watercourse

- In order for the new watercourse to be ready for use before June 1, 2006, the following requirements need to be undertaken:
  - Construction of a new breakwater (subject to the Municipal Class Environmental Assessment (Class EA) as a Schedule 'C' activity)
  - Modification of the existing Cowan Outfall (subject to the Municipal Class EA as a Schedule 'B' activity)
  - Building of ancillary facilities
- The existing breakwater within the new watercourse will be removed.
- Since construction of the new breakwater and re-location of the Cowan Outfall are considered to be part of a single project, the more rigorous Class EA Schedule must apply (in this case, Schedule 'C'). As a result, the extension of the Cowan Outfall will be planned in conjunction with the new breakwater.

Overview of the Coordinated Environmental Assessment Process

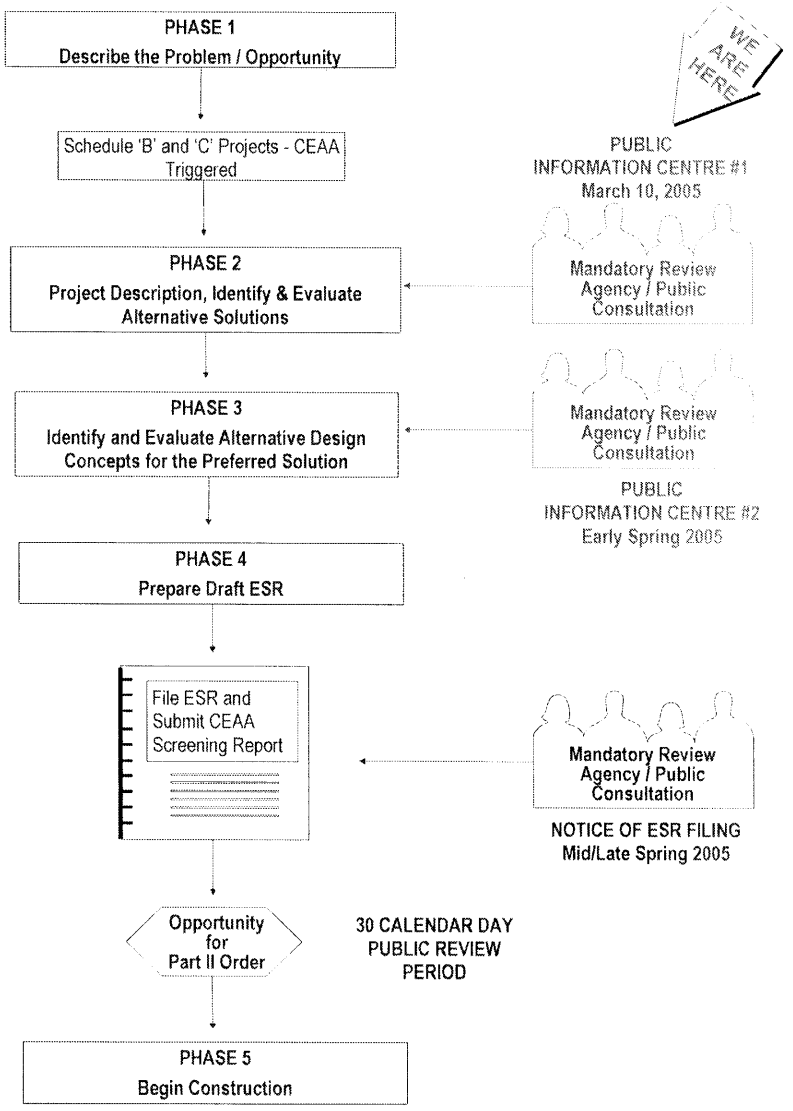
- This project is being conducted through a **Coordinated Environmental Assessment** process in accordance with the requirements of both the approved **Municipal Class EA** and the **Canadian Environmental Assessment Act (CEAA).**

- The Municipal Class EA is approved under the *Environmental Assessment Act* and enables the planning of municipal infrastructure projects in accordance with a proven procedure for protecting the environment.

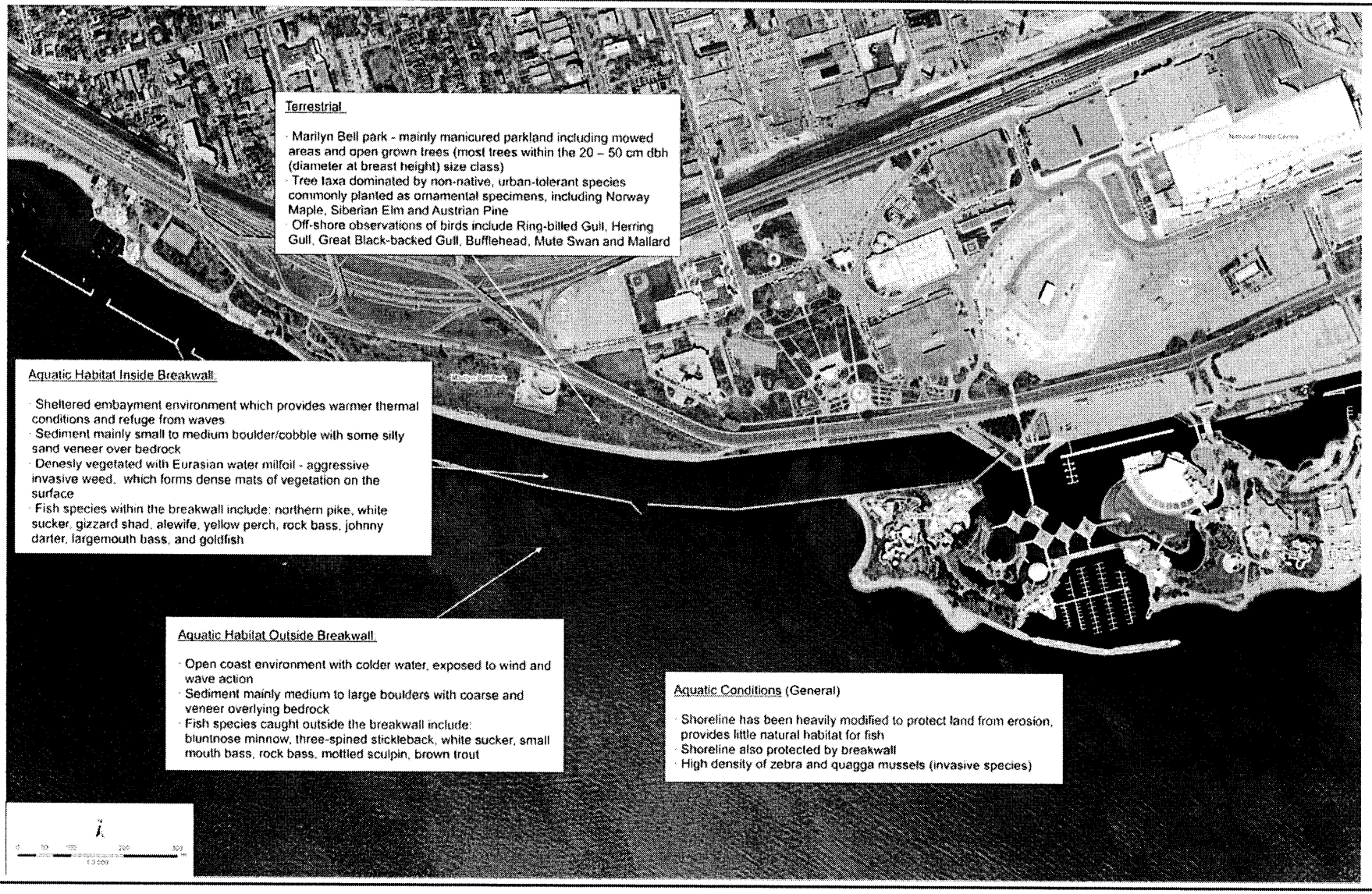
- The Schedule 'C' Class EA process includes public and review agency consultation, an evaluation of alternatives, an assessment of the effects on the environment, and identification of reasonable measures to mitigate any adverse effects.

- The public notice of filing the ESR will become the Notice of Completion for both the Schedule 'B' and 'C' projects.

- The ESR will include all CEAA documentation requirements and will be submitted to the Canadian Environmental Assessment Agency (functioning as the federal environmental assessment coordinator).



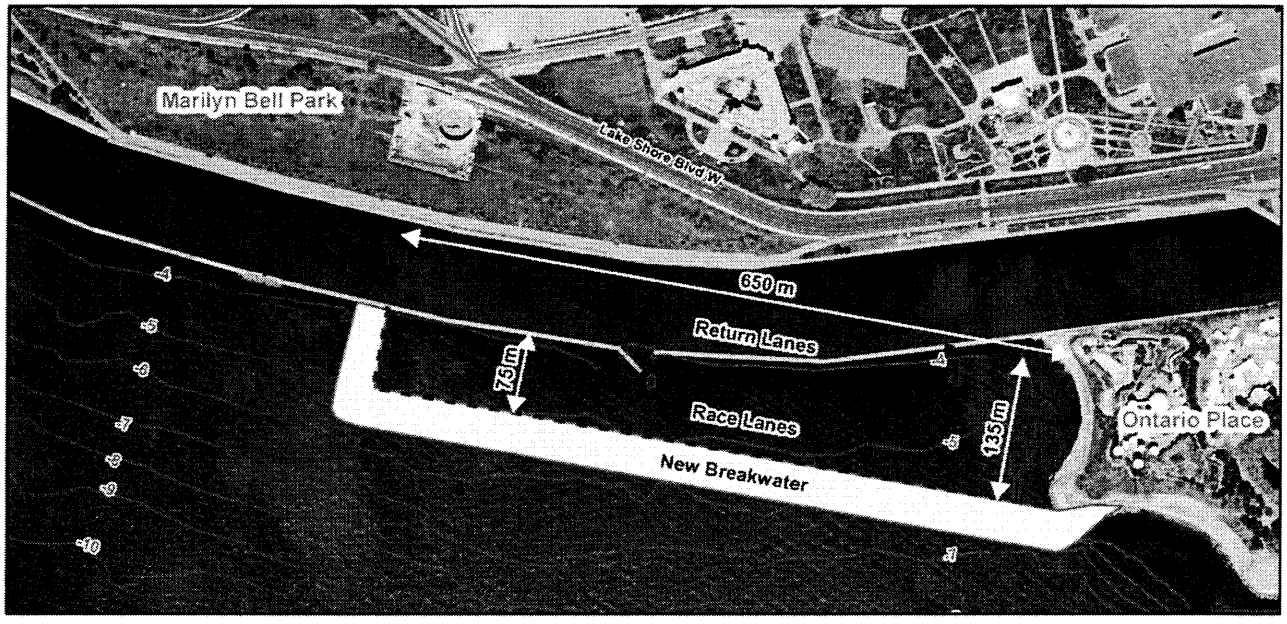
Existing Conditions



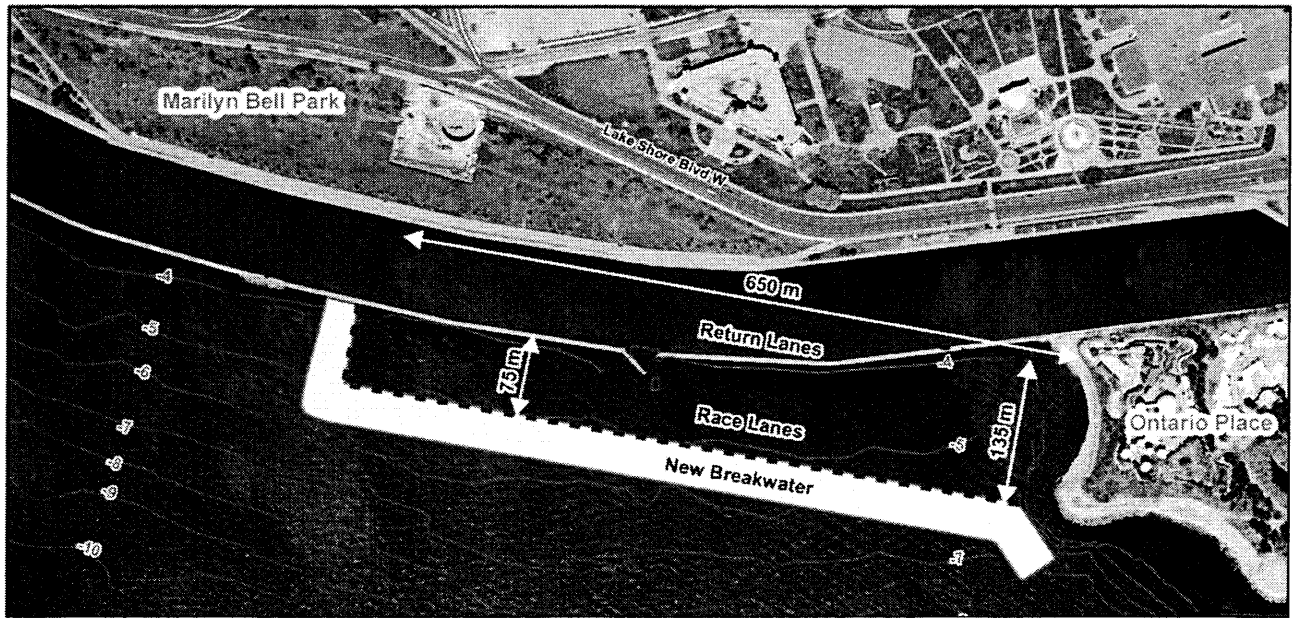
Alternative Breakwater Solutions

1. Do Nothing: No new breakwater would be built (acts as a comparative benchmark).

2. Build a New Breakwater: Connected to Ontario Place



3. Build a New Breakwater: Not Connected to Ontario Place



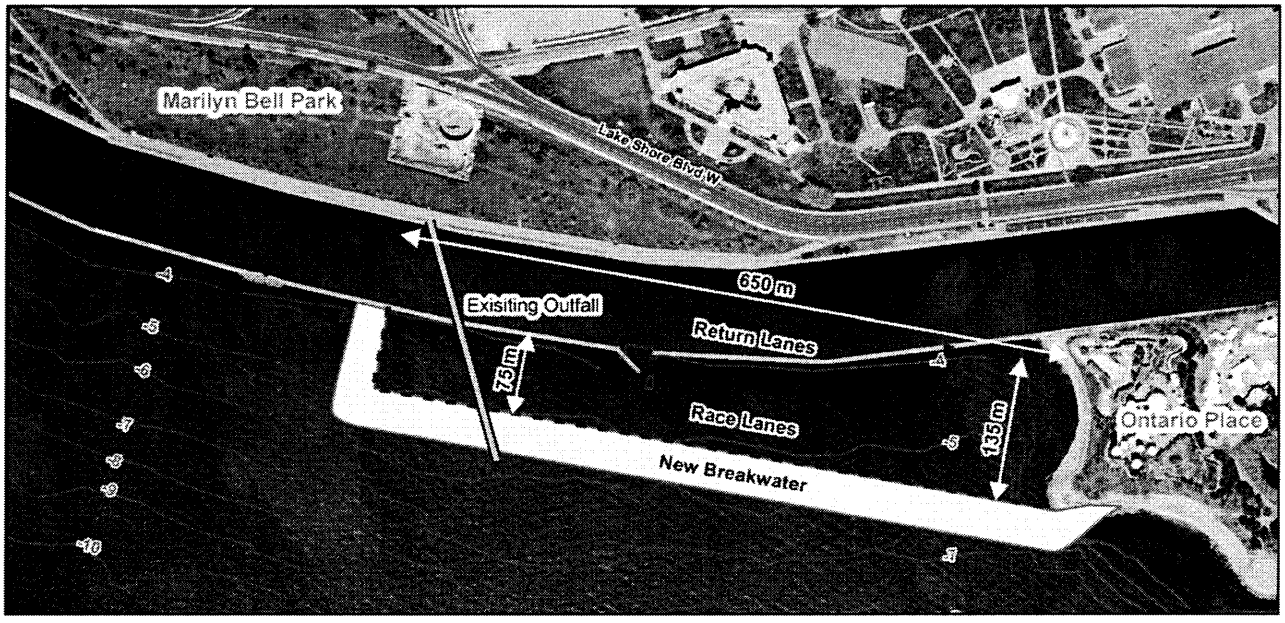
Comparative Evaluation Summary of the Alternative Breakwater Solutions

Category of Consideration / Evaluation Criteria	Alternative Solution No. 1 Do Nothing	Alternative Solution No. 2 Connected to Ontario Place	Alternative Solution No. 3 Not Connected to Ontario Place
TECHNICAL			
Potential ability of breakwater to protect watercourse from waves.	Provides no wave protection for entire watercourse.	Provides wave protection for entire watercourse including the eastern end (starting area).	Provides wave protection for most of watercourse except for eastern end (starting area) requiring the need for additional wave protection at this location.
Potential length of new breakwater.	No new breakwater.	Shorter length of new breakwater needed to be constructed.	Longer length of new breakwater needed to be constructed.
Potential for possible future public access along new breakwater.	No possible future public access provided.	Possible future public access provided via direct connection to Ontario Place.	Possible future public access would require a bridge or causeway structure to be built from Ontario Place.
NATURAL ENVIRONMENT			
Potential long-term effects on existing aquatic features.	No long-term effects on aquatic features.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.
Potential effects on water quality within the watercourse.	Water quality within the watercourse remains unchanged.	Greater potential for reduced water quality within watercourse due to lack of water circulation because breakwater would be connected to Ontario Place. This may be mitigated through the placement of pipes in he new breakwater to increase water circulation.	Less potential for reduced water quality within watercourse because eastern end of breakwater would not be connected to Ontario Place.
Potential for short-term construction related effects on aquatic features.	No short-term construction related effects on aquatic features.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.
Potential for short-term construction related effects on migratory birds.	No short-term construction related effects on migratory birds.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.
Potential effects on existing terrestrial features.	No effects on terrestrial features.	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).
SOCIAL ENVIRONMENT			
Potential short-term construction related effects on existing area residents, businesses, and/or events.	No short-term construction related effects on existing area residents, businesses, and/or events.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.
Potential effects on existing quiet water area for paddlers/rowers.	Existing quiet water area remains unchanged.	A larger quiet water area would be created for use by paddlers/rowers.	A larger quiet water area would be created for use by paddlers/rowers.
Potential effects on boat access to Ontario Place marina.	Boat access to Ontario Place marina remains unchanged.	Ontario Place marina access relocated to the west end of the new breakwater. Requires management of boats entering marina during course events.	Ontario Place marina access relocated to between end of new breakwater and Ontario Place shoreline. Requires management of boats entering marina during course events.
CULTURAL ENVIRONMENT			
Potential effects on underwater cultural/heritage resources.	No potential negative effects on underwater cultural/heritage resources.	Archaeological investigation currently underway to determine potential for underwater effects.	Archaeological investigation currently underway to determine potential for underwater effects.
FINANCIAL			
Potential capital costs associated with the alternative.	No capital costs.	Less expensive (detailed costing to occur once design has been finalized).	More expensive (detailed costing to occur once design has been finalized).
RANKING OF SOLUTIONS	**THIRD**	**RECOMMENDED**	**SECOND**

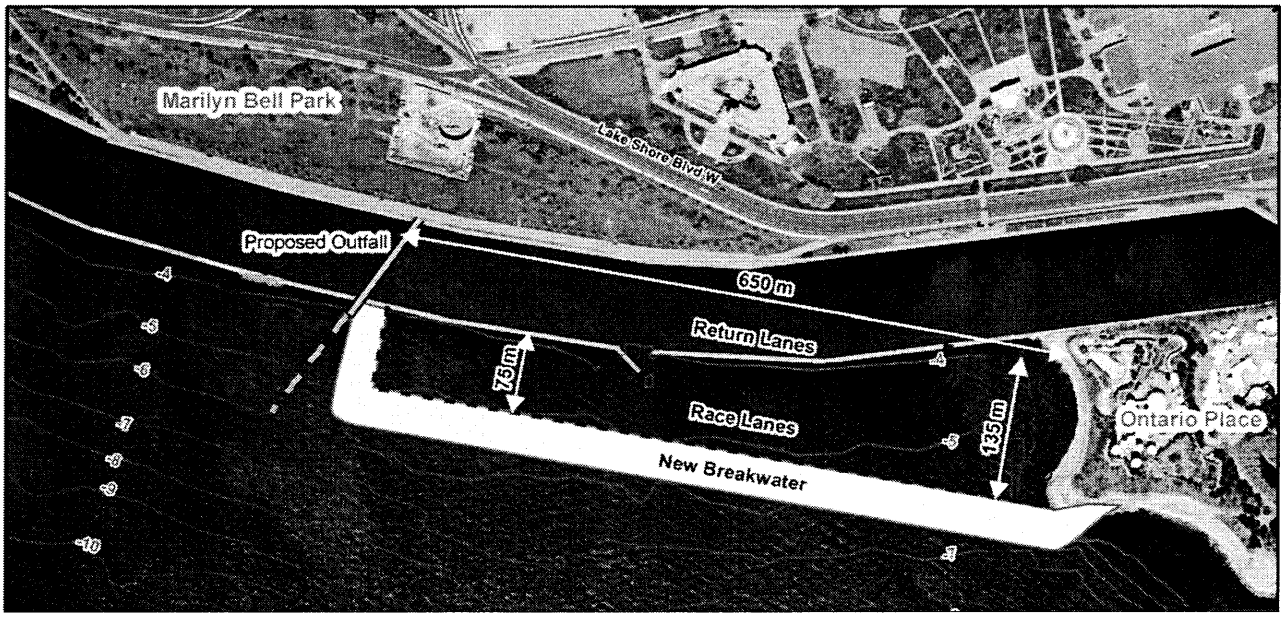
Alternative Cowan Outfall Solutions

1. Do Nothing: The current Cowan Outfall would remain in place as is (acts as a comparative benchmark).

2. Maintain Existing Outfall Alignment and Extend at Lower Depth



3. Build a New Outfall on a New Alignment



Comparative Evaluation Summary of the Alternative Cowan Outfall Solutions

Category of Consideration / Evaluation Criteria	Alternative Solution No. 1 Do Nothing	Alternative Solution No. 2 Maintain Existing Outfall Alignment and Extend at Lower Depth	Alternative Solution No. 3 New Outfall Alignment
TECHNICAL			
Potential effects on current outfall operation.	Current outfall operation remains unchanged.	The current outfall will be out of service for an extended length of time during construction.	The current outfall will be out of service for a shorter length of time during construction.
NATURAL ENVIRONMENT			
Potential long-term effects on existing aquatic features.	No long-term effects on aquatic features.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.
Potential effects on water quality within the watercourse.	Greater potential for reduced water quality due to effluent discharge within watercourse.	Water quality within watercourse unaffected by effluent discharge from outfall.	Water quality within watercourse unaffected by effluent discharge from outfall.
Potential for short-term construction related effects on aquatic features.	No short-term construction related effects on aquatic features.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.
Potential for short-term construction related effects on migratory birds.	No short-term construction related effects on migratory birds.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.	Minor short-term disruption to stopover / roosting areas in the vicinity of construction activities.
Potential effects on existing terrestrial features.	No effects on terrestrial features.	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).
SOCIAL ENVIRONMENT			
Potential short-term construction related effects on existing area residents, businesses, and/or events.	No short-term construction related effects on existing area residents, businesses, and/or events.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.
Potential effects on the short-term use of Marilyn Bell Park.	Short-term use of Marilyn Bell Park remains unchanged.	A portion of Marilyn Bell Park would have to be closed for an extended length of time.	A portion of Marilyn Bell Park would have to be closed for a shorter length of time.
CULTURAL ENVIRONMENT			
Potential effects on underwater cultural/heritage resources.	No potential negative effects on underwater cultural/heritage resources.	Archaeological investigation currently underway to determine potential for underwater effects.	Archaeological investigation currently underway to determine potential for underwater effects.
FINANCIAL			
Potential capital costs associated with the alternative solution.	No capital costs.	More expensive (detailed costing to occur once design has been finalized).	Less expensive (detailed costing to occur once design has been finalized).
RANKING OF ALTERNATIVE SOLUTIONS	**THIRD**	**SECOND**	**RECOMMENDED**

Rationale for the Recommended Solutions

New Breakwater – Alternative Solution #2: Connected to Ontario Place

- Connection to Ontario Place provides greater wave protection at east end of watercourse.
- Shortest breakwater length resulting in the shortest construction time.
- Less expensive than Alternative Solution #3.

Cowan Outfall – Alternative Solution #3: New Alignment

- Limited period of time that outfall is out of service.
- Limited period of time that a portion of Marilyn Bell park is closed for construction related activities.
- Less expensive than Alternative Solution #2.

The Recommended Solutions

The Next Steps . . .

- Comments received from this PIC will be considered along with those received from review agencies. This information will be used to identify the preferred breakwater and outfall solutions.

- Alternative Design Concepts for implementing the preferred breakwater solution will be developed and comparatively evaluated to identify the recommended concept.

- The preferred solutions, the alternative breakwater design concepts, and the recommended breakwater design will be presented at a second PIC scheduled for early spring.

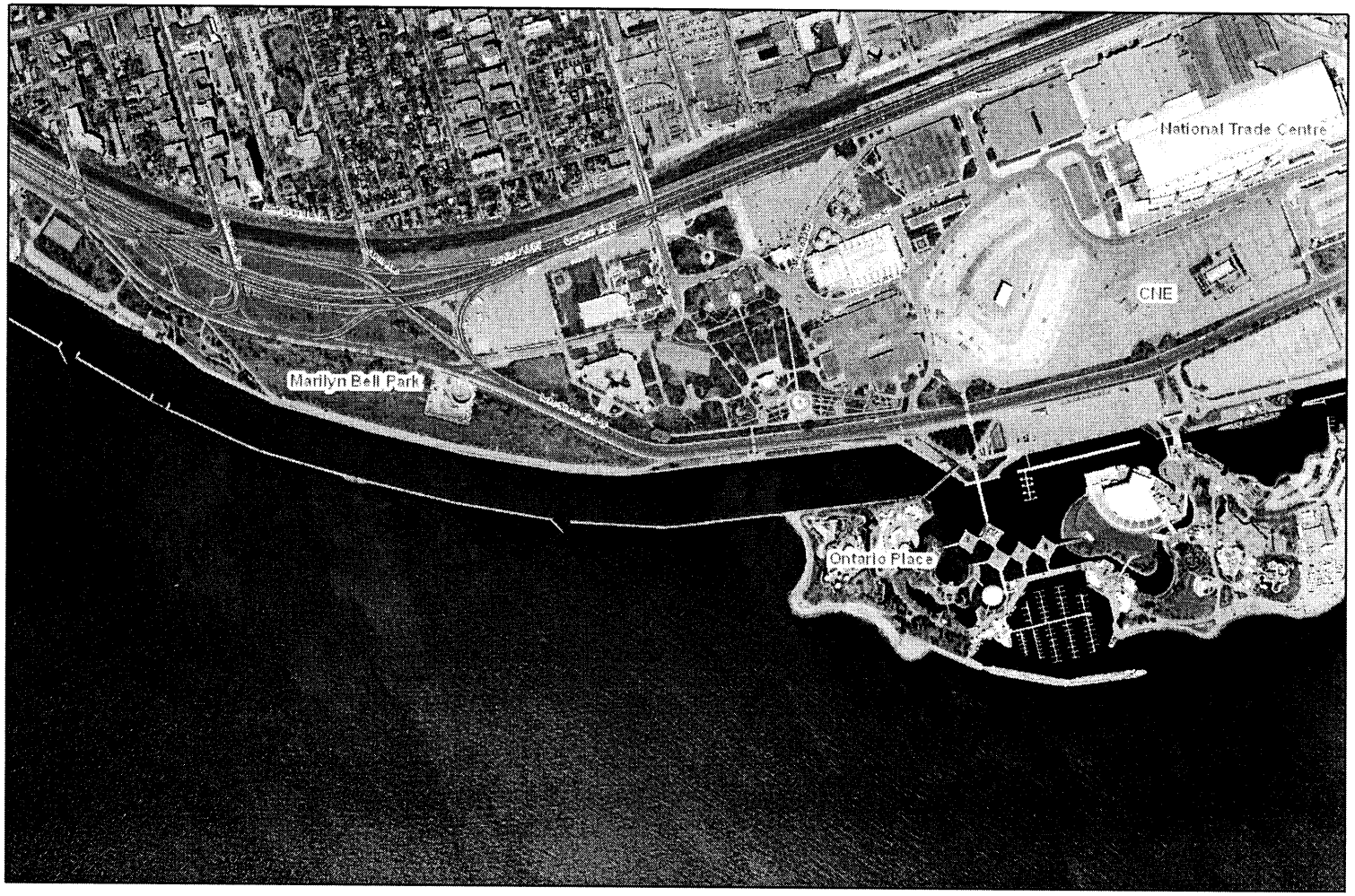
- If you have any comments or questions following PIC #1, please contact:

Nancy Gaffney
Toronto Region Conservation Authority
5 Shoreham Drive
Toronto, ON M3N 1S4
Tel: (416) 661-6600 Ext. 5313
Fax: (416) 667-6278
E-mail: ngaffney@trca.on.ca

Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005



TORONTO WATERFRONT
REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Feasibility Study

- Recommended option is 650 m long x 135 m wide.
- Budget is $23 M.
- Includes:
  - New Breakwater
  - Removal of Existing Breakwater
  - Fish Compensation
  - Modest Park Improvements
- Does *not* include: Permanent buildings.

Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Feasibility Study

- Commitment to proceed came in January 2005.
- The environmental assessment process commenced in February 2005.
- Refinements to the recommended option.
- Presented 2 variations to stakeholders on February 21, 2005.
- Feedback was received.

Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Public Meetings

- There are 2 public meetings planned:
  - PIC #1 – Tonight
  - PIC #2 – Early Spring
- There will be stakeholder input on the design during the process.

Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Environmental Assessment

- The Project is subject to 3 Environmental Assessment processes:
  - Federal Environmental Assessment
  - Municipal Class Environmental Assessment
  - Ministry of Natural Resources Class Environmental Assessment for MNR Resource Stewardship and Facility Development Projects
- The 3 Environmental Assessment processes will be coordinated to reduce duplication.

Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Municipal Class Environmental Assessment Process

- The Municipal Class EA is approved under the *Environmental Assessment Act* to enable the planning and design of municipal infrastructure projects.

- The two municipal infrastructure parts of the Project subject to the Municipal Class Environmental Assessment process are:

  - New Breakwater: Schedule 'C' undertaking

  - Modification of the Cowan Outfall: Schedule 'B' undertaking

TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Municipal Class Environmental Assessment Process

- The Municipal Class EA process being followed includes:
  - Public and review agency consultation
  - An evaluation of alternatives
  - An assessment of the potential effects on the environment
  - Identification of reasonable measures to mitigate any adverse effects

TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

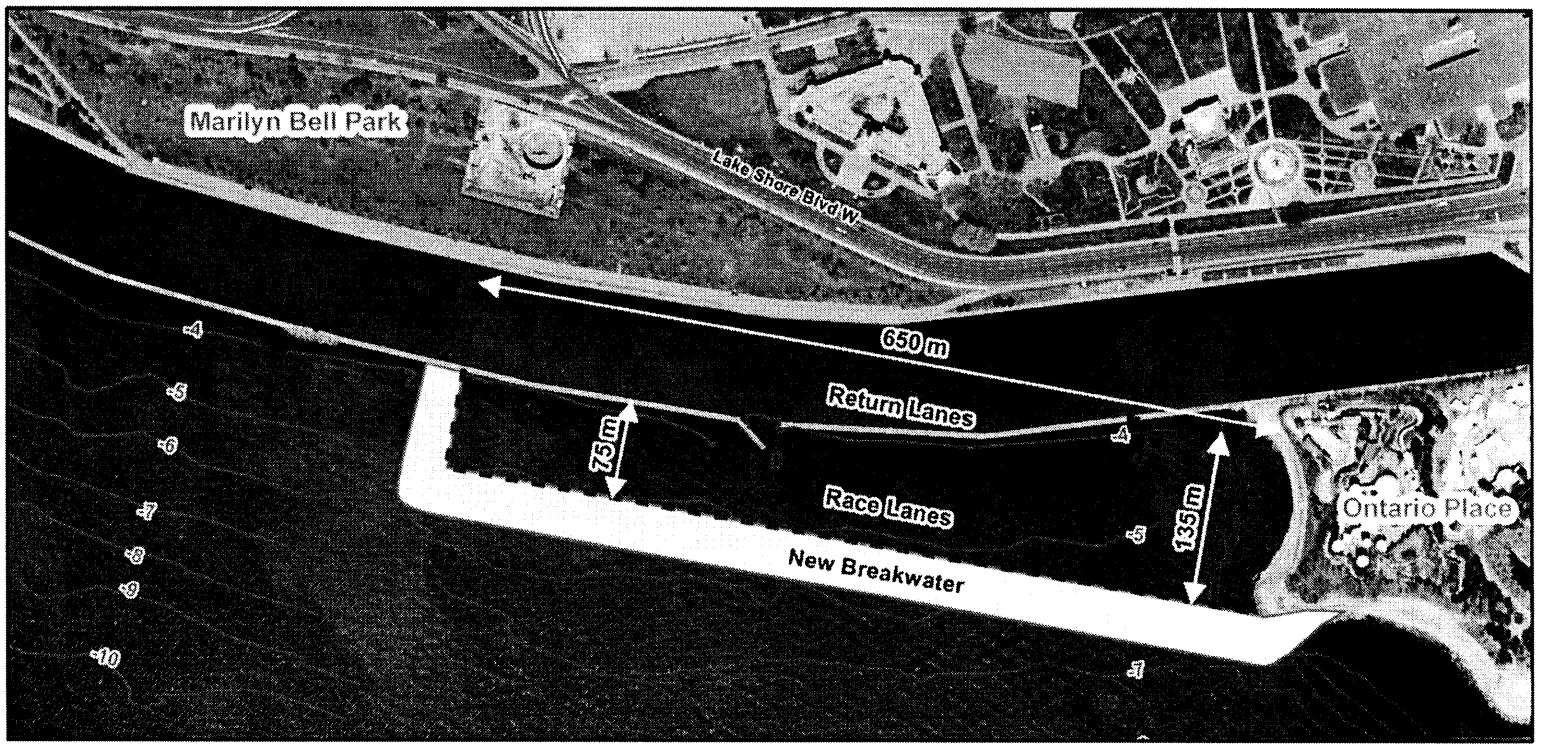
Public Information Centre #1

March 10, 2005

Breakwater Alternatives

1. Do Nothing: No new breakwater would be built (acts as a comparative benchmark).

2. Build a New Breakwater: Connected to Ontario Place



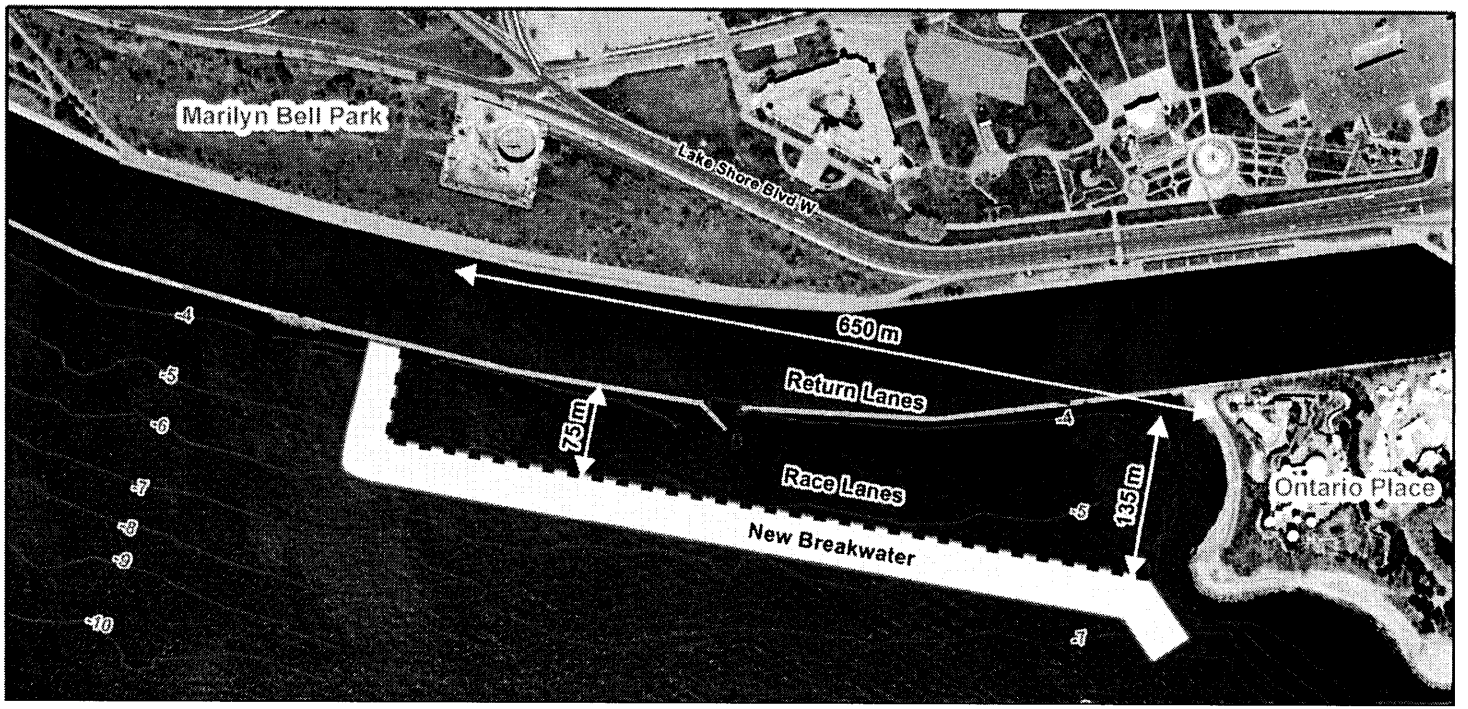
Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Breakwater Alternatives

3. Build a New Breakwater: Not Connected to Ontario Place



TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

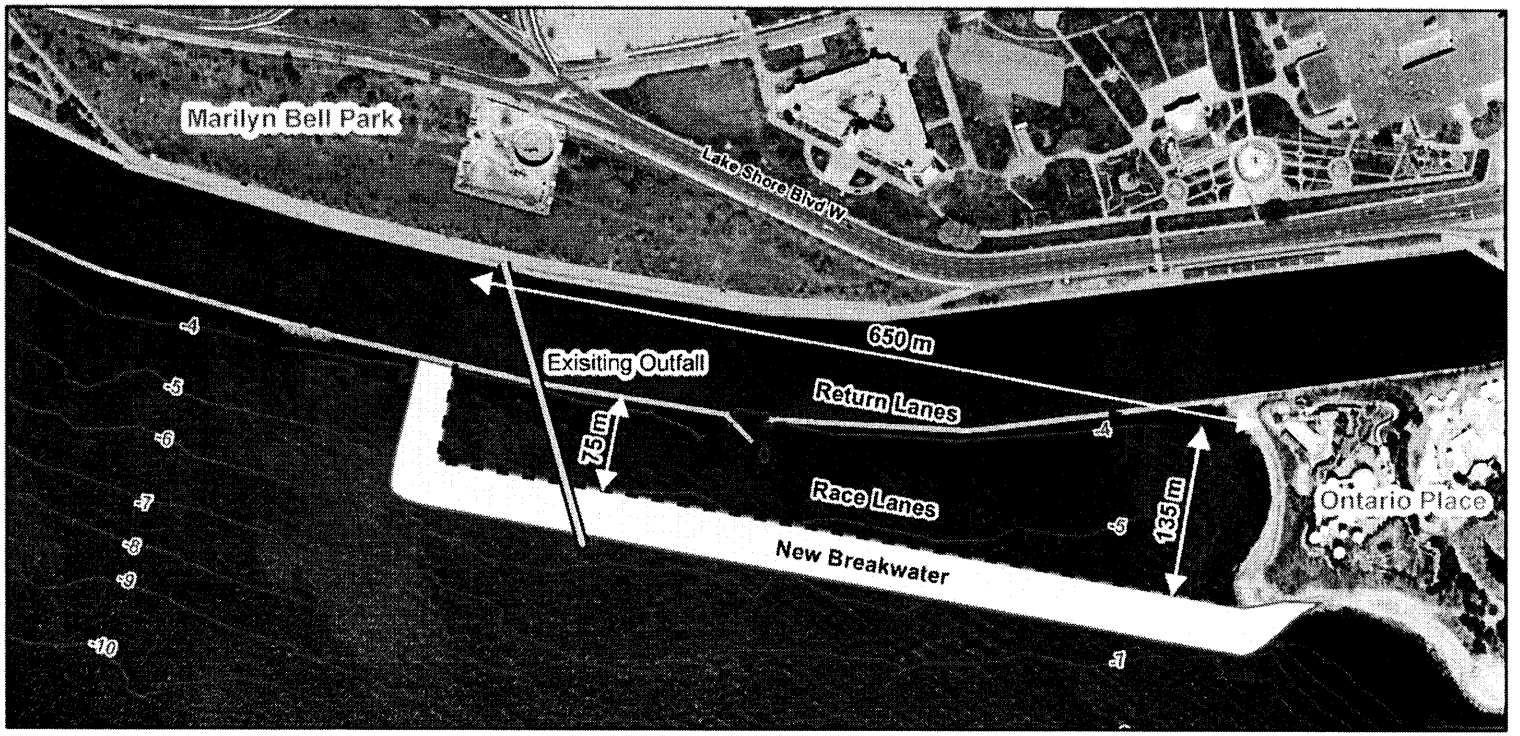
Public Information Centre #1

March 10, 2005

Cowan Outfall Alternatives

1. Do Nothing: The current Cowan Outfall would remain in place as is (acts as a comparative benchmark).

2. Maintain Existing Outfall Alignment and Extend at Lower Depth



TORONTO WATERFRONT REVITALIZATION CORPORATION

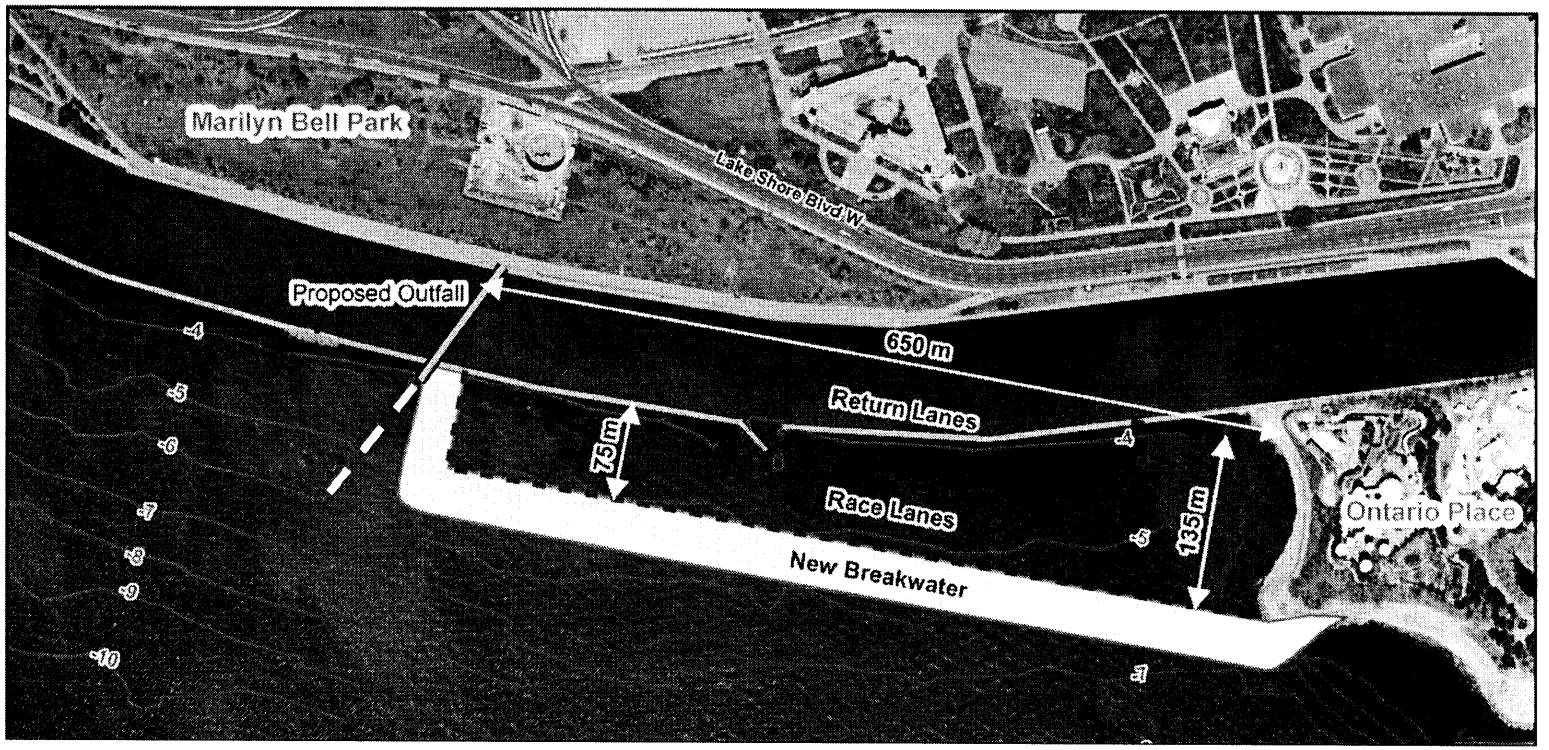
Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Cowan Outfall Alternatives

3. Build a New Outfall on a New Alignment



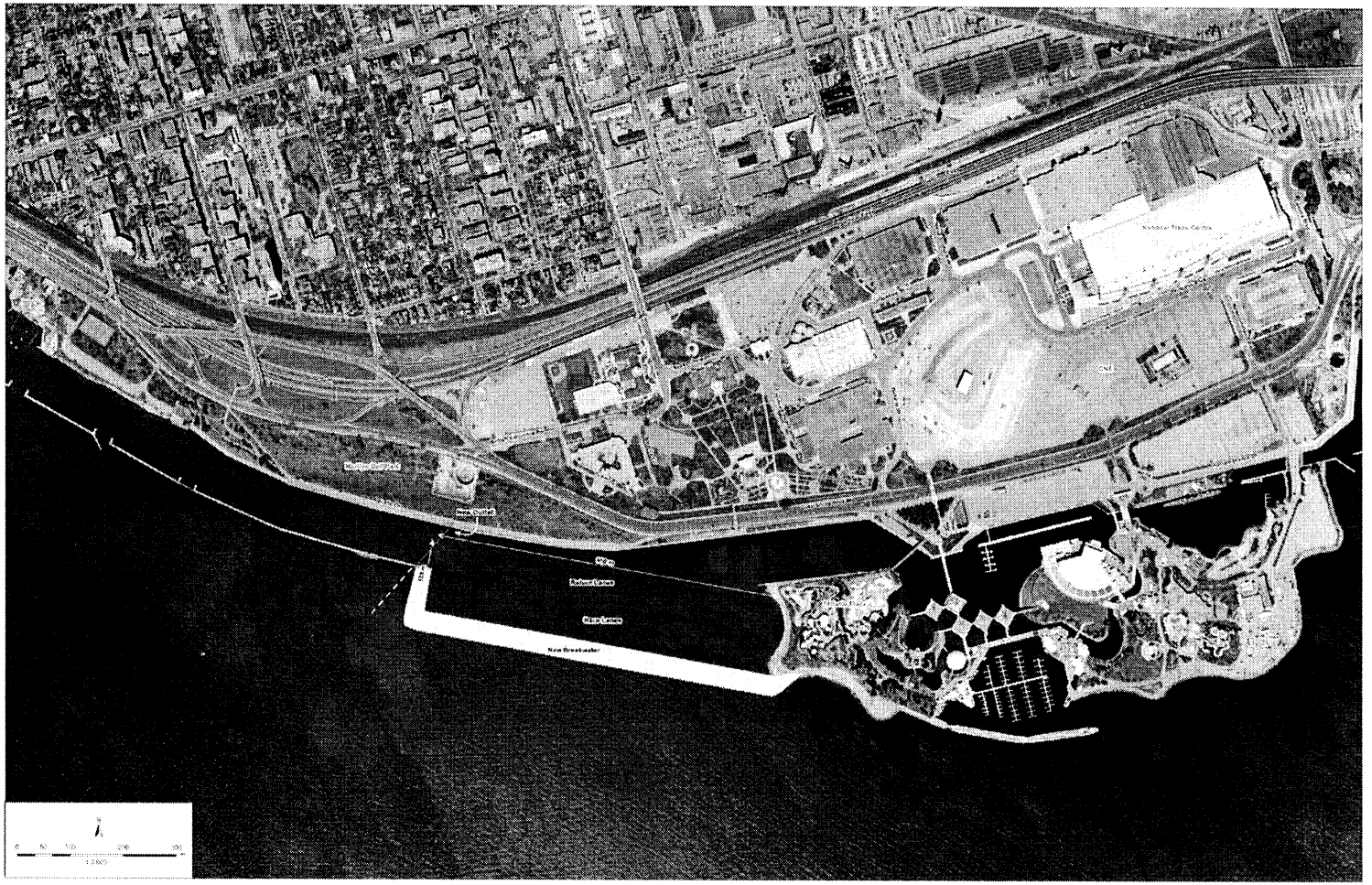
TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Recommended Solutions



TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #1

March 10, 2005

Next Steps ...

- Comments received from this PIC will be considered to identify the preferred breakwater and outfall solutions.
- Alternative Design Concepts for implementing the preferred breakwater solution will be developed and comparatively evaluated to identify the recommended concept.
- The recommended breakwater design will be presented at PIC #2 scheduled for early spring.

Appendix F

PIC No. 1 Completed Comment Forms

(1)

COMMENT FORM

PN 50170

PIC #1 Western Beaches Watercourse Coordinated EA
March 10, 2005

We are interested in hearing any comments you may have associated with the content of the EA study. Thank-you for clearly writing your comments in the space provided below (additional space is available on the back).

A Committee to discuss the second phase can be put in place so that we can begin to plan for the future.

The Grenadier Group which I represent is a stakeholder along the Western Beaches at the Sunnyside Pavilion Cafe and wants to be involved.

Comments and information regarding this project are being collected to assist the Project Team in meeting the requirements of the EA Act and the CEAA. With the exception of personal information, all comments will become part of the Public Record and may be used in the Environmental Study Report / Screening Report.

Please submit your written comments before leaving the PIC. If you require more time to comment, please mail in the comment sheet by **March 31st, 2005** to:

Nancy Gaffney
Toronto Region Conservation Authority

5 Shoreham Drive
Toronto, ON M3N 1S4
Tel: (416) 661-6600 ext. 5313
Fax: (416) 667-6278
E-mail: ngaffney@trca.on.ca

(2)

COMMENT FORM

PN 50170

PIC #1 Western Beaches Watercourse Coordinated EA
March 10, 2005

We are interested in hearing any comments you may have associated with the content of the EA study. Thank-you for clearly writing your comments in the space provided below (additional space is available on the back).

(1) It disturbs me that there has not yet been any consultation to the provincial and national canoeing/kayaking/rowing sport governing bodies. That consultation should have been undertaken prior to start of design.

(2) Where are the C.V.s of the engineers/consultants working on this project? What experience/expertise do they have in designing race courses. My impression from this meeting is: not much if any. Please post C.V. on your website. How were these engineers chosen?

Comments and information regarding this project are being collected to assist the Project Team in meeting the requirements of the EA Act and the CEAA. With the exception of personal information, all comments will become part of the Public Record and may be used in the Environmental Study Report / Screening Report.

Please submit your written comments before leaving the PIC. If you require more time to comment, please mail in the comment sheet by **March 31st, 2005** to:

Nancy Gaffney
Toronto Region Conservation Authority

5 Shoreham Drive
Toronto, ON M3N 1S4
Tel: (416) 661-6600 ext. 5313
Fax: (416) 667-6278
E-mail: ngaffney@trca.on.ca

PLEASE CLEARLY PRINT YOUR NAME AND CONTACT INFORMATION BELOW:

First Name:		**Street:**	
Last Name:		**City / Town:**	
Telephone:		**Postal Code:**	
		E-mail:	

TORONTO WATERFRONT

(3)

COMMENT FORM

PN 50170

PIC #1 Western Beaches Watercourse Coordinated EA
March 10, 2005

We are interested in hearing any comments you may have associated with the content of the EA study. Thank-you for clearly writing your comments in the space provided below (additional space is available on the back).

Nancy:-

Technical planning of course.

Don May 416-438-6047

[illegible]@hotmail.com

Comments and information regarding this project are being collected to assist the Project Team in meeting the requirements of the EA Act and the CEAA. With the exception of personal information, all comments will become part of the Public Record and may be used in the Environmental Study Report / Screening Report.

Please submit your written comments before leaving the PIC. If you require more time to comment, please mail in the comment sheet by **March 31st, 2005** to:

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E-mail: ngaffney@trca.on.ca

PLEASE CLEARLY PRINT YOUR NAME AND CONTACT INFORMATION BELOW:

First Name:		**Street:**	
Last Name:		**City / Town:**	
Telephone:		**Postal Code:**	
		E-mail:	

TORONTO WATERFRONT

Mike Haslam - IDBF
- 011 - 441633256796

John Campbell - you need to call him.

Canadian Canoe Association
Western Ontario Division

March 9, 2005
Delivered by hand

Ms Nancy Gaffney, B.Sc., Waterfront Specialist
Toronto and Region Conservation
5 Shoreham Drive
Downsview, Ontario M3K 1S4

Dear Ms. Gaffney:

Re: Toronto Watercourse Facility

We are responding to your invitation for comments about the proposed new breakwater which will facilitate the opportunity to build a watercourse suitable to promote sport tourism in Toronto.

For several years, our sport of canoe kayak has been in support of and actively pursued a world-class regatta course to meet ICF standards in the Toronto area; needless to say we were disappointed that Toronto was not successful in its bid to host the 2008 Olympics.

The proposed site appears to satisfy the need to repair a breakwater and build a suitable dragonboat course for the 2006 Club Crew World Championships. However, to suggest it is a legacy for other water sports is questionable.

Many of us in this sport have concerns about having a watercourse west of Ontario Place where the waterfront is fully exposed to weather coming across a huge expanse of unobstructed lake. Canoe kayak is very sensitive to wind and rough water. Our sport is a flatwater sport, similar to the sport of rowing. Our athletes feel the location is too exposed for consistent flatwater conditions. The site is not conducive to canoe kayak.

In addition, except for a championship regatta in the younger age classes at 500m, our divisional, provincial, and national championships require a 1000m race course (plus 300m for alignment and finish area), and there is doubt we would hold a regatta here for our younger paddlers given the water conditions. The proposed course is not conducive to canoe kayak.

Despite offering to provide input to the feasibility study awarded to MacViro, canoe kayak was not approached nor was it included as one of the stakeholders referred to in the "Dragon Boat

Course Feasibility Study Final Report, September 2004". Indeed, our first appearance was by invitation with short notice to the first stakeholders meeting convened on Monday, February 21, 2005 when this dragonboat course was presented as a *fait accompli*.

To pretend that this site and this course can host serious regattas is a mistake, and to suggest that canoe kayak supports this site is not correct.

Toronto is in a position to build a multi-sport regatta course, and to do it right in the first place. It is recommended that the search continue for a suitable site and to involve all stakeholders in this process. There has been too little time for meaningful concrete discussion amongst the members of our various organizations. We suggest that there be stakeholder meetings on a regular basis with a goal of finding the ideal solution for a world-class regatta course both from a location and from a financial perspective.

Yours very truly,

J Tutty

Judy Tutty, Flag Officer
Suite 801, 1271 Walden Circle, Mississauga Ontario L5J 4R4
judy.tutty@sympatico.ca / 905.823.0584

c
John Campbell
Karen Pitre
John Tracogna
Bob Stuart

(6)

ROWING CANADA AVIRON
www.rowingcanada.org

Mr. John Campbell
Toronto Waterfront Revitalization Corporation
207 Queen's Quay West
Suite 822
Toronto, ON
M5J 1A7

March 10, 2005

Dear Mr. Campbell,

I am writing to you as a stakeholder in the proposed new Western Beaches Watercourse, and in response to the request for input from TWRC. There are several points that we would like to bring forward.

1. *Rowing Canada Aviron* supports the development of a multi-sport Watercourse within the GTA. We believe this development is long overdue and, if designed and built to the proper FISA standards, will enable us to attract numerous regattas to the city while enhancing the city economically and culturally.

2. We are aware of the significance of the three levels of government coming together on a project for the Toronto Waterfront—we understand how long this has been in discussions and we are very pleased that the three levels of government have committed $23M to a project to support water-sports on the Waterfront.

3. We have been advised by TWRC that this Watercourse is not being built as a rowing facility and, therefore, will not enable us to attract these events. While regrettable, we understand the cost constraints of building a 2000 meter course in this location. It is important that this Watercourse is NOT identified as a rowing course as this is misleading.

4. Rowers support event hosting and welcome an international dragon boat Championship. We understand from *Dragon Boat Canada* that the event in August, 2006 may be held in a number of venues in Toronto. To build a course that has limited use and that cannot be used by other sports is a missed opportunity. This would be ameliorated if there were a plan, timetable and budget for its extension to a multi-sport facility.

201 - 1234 Esquimalt Rd. · Victoria, BC V9A 3N8 · Tel/tél: (250) 361-4222 or/ou 1-877-RCA-GROW · Fax/téléc: (250) 361-4211 · E-mail/courriel: rca@rowingcanada.org
Member of F.I.S.A., Canadian Olympic Committee/Membre de F.I.S.A., Comité Olympique Canadienne

(7)

Karl van Kessel - Fwd: FW: Dragon Boat World Magazine and Toronto's new water course

From: Jo-Anne Lane
To: Karl van Kessel
Date: 14/03/2005 9:38 AM
Subject: Fwd: FW: Dragon Boat World Magazine and Toronto's new water course

[redacted]

Jo-Anne Lane, M.Sc.
Senior Ecologist, Gartner Lee Limited
300 Town Centre Blvd, Suite 300
Markham ON L3R 5Z6

Ph. 905.477.8400 ext. 319
Fax. 905.477.1456

>>> "Karen Pitre" <kpitre@sympatico.ca> 3/11/2005 12:53:40 PM >>>

-----Original Message-----
From: blake hara [mailto:blakehara@gmail.com]
Sent: Thursday, March 10, 2005 10:12 AM
To: sk@balmoralmkt.com; Sharifa Khan; John Tracogna; Laura Walters; John Hollins (2); Karen Pitre
Subject: Fwd: Dragon Boat World Magazine and Toronto's new water course

---------- Forwarded message ----------
From: publisher <publisher@dragonboatworld.com>
Date: Thu, 10 Mar 2005 07:42:57 -0800 (PST)
Subject: Dragon Boat World Magazine and Toronto's new water course
To: ngaffney@trca.on.ca

Dear Ms. Gaffney,
I am the Publisher and Editor of Dragon Boat World, the world's first and foremost authority on the sport of dragonboating. We are a Toronto based publication with an estimated readership of 30-50,000 in over 20 countries. I
also have successfully represented Canada in the sport at several world and continental championships.

As a long time Toronto resident and dragonboater, I'd like to lend my voice to
those supporting this fantastic new facility planned for Marilyn Bell Park.

I urge you not to be swayed by the various special interest groups with

private
agendas trying to undermine this venture.

This planned breakwater will succeed in drawing people to the lake, making the
area and city more vibrant in the process. It fits in perfectly with the revitalization plan.

Canada, and most specifically, Toronto, is currently riding an unprecedented wave of dragonboating success and popularity. It is one of the fastest growing
sports in the world and Toronto based teams have won the world championships 3
times in a row. We also have dozens of teams that consist wholly of breast cancer survivors, transplant candidates or survivors, mentally-challenged adults, high school students or the blind.

Supporting this sport and those teams is reason enough this facility should be
built. But, more importantly, the facility should be built because of it's potential for opening up this portion of the waterfront to the citizens of Toronto. The Dragon Boat Club Crew World Championships, while a great opportunity, are mere window dressing in comparison.

I urge you to stay true to the vision.

Konrad Doerrbecker
Publisher/Editor
Dragon Boat World

KD

Appendix G

PIC No. 1 Verbal Comments Received and Verbal Responses Provided

SUMMARY OF VERBAL COMMENTS RECEIVED IN THE QUESTION & ANSWER PERIOD FOLLOWING THE FORMAL PRESENTATION GIVEN AT PUBLIC INFORMATION CENTRE No. 1

No.	Summary of Comments Received	Summary of Responses Provided
1.	What is the breakwater constructed of?	Several alternatives, rubble mound breakwater, caisson alternatives and variations of these two. Traditionally, it has been a stone breakwater.
2.	There is a build up of waves from the shorewall to breakwater, athletes have a difficult time navigating. Rubble mound breakwall is good, however more examination is needed on the shorewall.	Stone breakwater dissipates energy more effectively. The objective is to have flat water inside the watercourse; there will be a much more effective breakwater than present resulting in fewer waves.
3.	Timelines may be too aggressive. Best section of the breakwater is being replaced. Any thought given to looking at an alternate location?	Examined 11 different options along that shoreline. The funding envelope is set and depth drives the cost. The ten other options examined were deeper and thus beyond the current funding envelope.
4.	Will the outfall will be low enough?	Yes, the purpose of the EA is to determine the desired alignment of the outfall.
5.	Does the proposed watercourse meet the dragon boat regulations? The provincial government built Ontario Place in the area where Argonaut Rowing Club rowed previously. The Argonaut Rowing Club is not opposed to dragon boats but need to be better involved in the planning process.	The bid put forward required that the watercourse meet the regulations of the International Dragon Boat Federation. A letter from the IDBF in support of the proposed watercourse is available. Stakeholders will be involved throughout the planning and implementation process.
6.	The Harbour Commission pioneered breakwater construction through the sinking steel freighters. Is this an option?	We have considered this option, however this is not a desired option because recycled steel is in great demand and decommission of freighters is problematic.
7.	How do we know that if the money becomes available to expand the course, we will not have to tear down the newly constructed breakwater?	When determining the alignment, a key consideration was extension of alignment. Current construction is based upon the current funding envelope, however we are not precluding options for the future.

No.	Summary of Comments Received	Summary of Responses Provided
8.	Will you not consider the needs of other stakeholders?	We are currently working within the current funding envelope. The extension of the watercourse may be considered in a future phase of the project.
9.	Are we looking ahead to consider buildings?	Currently, we are looking exclusively at the watercourse itself. Initial consultation has determined that permanent buildings are not desired.
10.	In regard to extending the watercourse, have you checked the width of a championship rowing course?	Yes, the width proposed is suitable for other water-based competitions.
11.	You stated that TWRC has documentation from the IDBF; do you have documentation from any other associations in regard to satisfying their requirements?	No, other international federations have not come to look at the proposed watercourse as it will not be long or deep enough. The project does not meet their standards. Width is locked in on for the future; we can dredge and extend the watercourse in future phases of the project.
12.	What is the width of the breakwater and height above the water level?	There will be more breakwater than currently present; height will be determined considering that it will facilitate the provision of flatwater throughout the seasons for different users.
13.	Would there be built structures? Could you drive a car on it?	It would be wide enough to drive a car, but that is not something that would occur on it. We are considering public access and future amenities.
14.	Second pedestrian route, creation of lake restorers (storm water remediation) and wind turbine development (third party financing may be a possibility). There is a need a big picture vision for the Toronto waterfront. Are these possibilities?	There are practical constraints and everything can not be done at once. TWRC has not lost the sustainability vision. The purpose of tonight is to introduce this project, input is welcome and will try to work in as much as possible.
15.	I think the proposed watercourse is great. The Shanghai course is great with baffles diffusing the water. People will want to use the breakwater for viewing on both sides. A 1000 race is standard; in Rome, the dragon boat race was run in a circle. Breakwater is a straight alignment, this is not in concert with the lakeflow. If there is extension to the watercourse, what effect would this have on the outfall?	The detailed design is currently being developed. In regard to the Cowan Avenue outfall, it will go through the new breakwater.

No.	Summary of Comments Received	Summary of Responses Provided
16.	There is a limited amount of time to work out the kinks, to have the course ready by 2006. Schedule is extremely tight and there appears to be many questions. Are you aware of the Humber Bay regatta course? It was never built, the western portion was built in front of Etobicoke. Portion east of the Humber was never built. Do you have access to this information?	Yes, we have access to this information.
17.	The location of the Argonaut Rowing Club to the Humber River is the worst part of the waterfront. Worst portion of Western Beaches is located in front of Sunnyside Park. Have you given serious consideration towards proposals put forward in the past?	Yes, we have given consideration towards past proposals and have access to this information.
18.	Which way would the course run? There is a need for temporary facilities (i.e. timing tower) and a 1300 metres needs to be considered for a multi-sport facility.	In regard to facilities, permanent, but moveable, structures will be provided as part of the watercourse. We are working the best we can within the current funding envelope to accommodate different sports. There is room and alignment to extend the watercourse eventually. Conceptually we understand the issue and as we get into the detailed design this will be further explored.
19.	Is the inner breakwater coming down? Who will use the facility after August 2006?	The breakwater in the middle will come down. In regards to usership, the course will be maintained by the City who will work to coordinate programming for the watercourse.
20.	Is there any assurance that this will not become a marina or sailing club?	Yes, there is assurance that the watercourse will not become a marina or sailing club.
21.	On a scale from 1 to 10 (10 being completed), what is the likelihood of the watercourse being completed for 2006?	In regard to the scale from 1 to 10, we need to receive approvals before determining that. We are on track and thus would currently be at a 5.
22.	I have concerns about safety issues for athletes.	TWRC looks to the users to decide the best way to use the watercourse.We will work together to address the safety design issues through the Stakeholder Advisory Committee.

No.	Summary of Comments Received	Summary of Responses Provided
23.	The watercourse is not something that can be programmed. The Argonaut Rowing Club will need continual access to the watercourse. There should be a contingency to better areas for water-based recreation. What are the other options?	For $23M, there will be a 650 metre course. The letter from IDBF confirmed the approval of this location of a watercourse. The funding is provided for a watercourse in this location. The funding cannot be moved elsewhere.
24.	In regard to the wall connected to Ontario Place, how will the boats get into this area if this option is pursued?	We have met with Ontario Place and will be managing this concern through the detailed design process.
25.	I am interested to know about the specific design of the breakwater.	The EA is looking at the potential impacts, such as loss of fish habitat. The detailed design will be determined through the EA process.
26.	Spectators will want to come on to the breakwater to get closer to the event.	In this stage, the breakwater will not accommodate viewers. Public amenities on the breakwater is a long term goal.
27.	How will the money be spent for this project? What are the timelines?	We can make this information available to you. We are currently working on refining the budget. As we refine the details, the budget will change.We will know by June 2005 and refine as necessary.
28.	Why did IDBF chose this site?	There are clubs located in the Western Beaches and there is a need to rebuild the breakwater. Dragon Boat Canada has tried to get the IDBF World Club Crew Championships three times in the past. Part of our mandate is to help Toronto establish a legacy. The 2006 event is a catalyst to get a formal watercourse initiated. There is a need to work together. Dragon Boat Canada wanted a longer course, but this is beyond the available funding. Additionally, we do not want to take away from other Southern Ontario niches. Other sites were examined, for example Centre Island which was too shallow and would require much fisheries compensation. The Shipping Channel and the Portlands was not feasible. We are looking at the road map for expansion; our initiative is with good intentions.

No.	Summary of Comments Received	Summary of Responses Provided
29.	I went to City Hall to better understand the political will. The money is committed the political will behind the project is for a multi-sport facility. Not clear of how input will be received. Need to get international standards into the design so that different sports can use this course. How TWRC is held accountable to a multi-sport facility?	TWRC is accountable through the Board and the three levels of government. We need to work with the international federations to achieve a multi-sport course within the current funding envelope. We will have public and stakeholder input during the design process; we are at a critical stage to get input from other stakeholders.
30.	Would like to draw attention to 1981, when Toronto tried to take the Hemley from St. Catherines. There was huge political opposition. Toronto needs more flat water, the creation of this watercourse can be the first message speaking to expansion.	
31.	One objective is to soften the edges of the Lake. By building this facility do we preclude the possibility of softening the edges at Marilyn Bell Park? Can we revise the plan for soft edges?	Changing the integrity of the dockwall is a long term proposition and is part of the current discussions.
32.	What is the height of the breakwater? Who will own the breakwater? Will the owner be responsible for further expansion west?	We do not currently know of height which will be determined through detailed design. The City of Toronto will have ownership, although will not be responsible for further expansion west. There is a need to generate political will for this to happen.
33.	In regard to building a foundation, from a political perspective, any event that will bring in tourists is a benefit Sharifa's comment in regard to a solid foundation is true however you need to plan for further expansion. Shortsighted thinking will potentially lead to a white elephant; there is a need to look at long term plan. Phase 1, Phase 2, Phase 3 need to be planned.	This is Phase 1 and the width can accommodate a multi-sport facility.There are options to expand. We accept the fact that the desire is to continue to expand, we are not precluding future phases. We need momentum to carry this initiative forward, the objective is a much bigger picture. We are going to proceed with design in a cross section way meaning that the current design can be used when extending the course in the future.

No.	Summary of Comments Received	Summary of Responses Provided
34.	There is concern that this may not be the right place for this watercourse. The major concern is to know what is going to happen post event and also safety. There appears to be lack of support from other sport governing bodies. Will Marilyn Bell Park stay a park without permanent facilities? Marine based construction of the breakwater would be ideal as opposed to staging at the parking lot. From a rowing standpoint, we want an integrated planning approach. We want to be at weekly meetings with MacViro. Can the rowers and the paddlers get assurance that what is left is the same, if not better, than what is currently available?	In regard to use of the facility post event, we have had preliminary discussions with City of Toronto. Community Advisory Committee will be established to oversee the use of the watercourse.In regard to a permanent clubhouse, it would have to be on City owned land. City of Toronto does not want permanent facilities. The decision would need to go through City Council. It is not currently being considered an option. In terms of construction, the use of the parking lots is of real concern. We are working with construction managers and will have details regarding construction staging in the near future. We are inclined towards marine based construction and are not looking at staging west of Marilyn Bell Park in the parking lot. We will minimize our footprint at Marilyn Bell Park. There has been consultation with user groups along this section of the waterfront and we know of events booked. We want to minimize the impact on existing clubs and are examining possible mitigative measures.
35.	What is the firm cost to extend to 1300 metres?	The information gained from the first phase of work will result in a more accurate cost estimate for extension.
36.	Are you inviting national sport federations for involvement?	Yes, they are invited to participate in the Stakeholder Advisory Committee.
37.	How will the rowers come in? Can the watercourse be closed on an angle at the west end?	We are still looking at these aspects. The more it is angled, the greater the cost.
38.	This is a first step. You should have more attention to your sports; sports in Toronto d o not get the attention that they deserve. You need to support the initiative. We need leadership, we need a spark, we need the event. We need to encourage the three levels of government to continue the expansion of the breakwater. The government can find the money. Participate, keep the pressure on elected representatives. Need to press the issues; define what is needed for the next steps.	
40.	We appreciate the opportunity for input, J. Suttcliffe alluded to the once a week meetings with MacViro. We would like additional representation.	

No.	Summary of Comments Received	Summary of Responses Provided
41.	Assume TWRC goal is a legacywatercourse, do we want someone from England (IDBF) to dictate what we do in Toronto?	We currently have a plan and funding; the community has tried for years to get a watercourse.
42.	I have not paddled in any venue that was perfect, the situation here will not be perfect, nothing will be perfect. What we have offered to us is $23M, do not let this opportunity get away. Government work by finding disagreement between groups. Do not overlook this opportunity.	

Appendix H

Notification of Public Information Centre No. 2

Toronto Star

March 31, 2005
April 4, 2005

five people who were in the building at the time escaped unharmed. By the time the first crew of firefighters arrived at 60 Carrier Dr., near Highway 27 and Finch Ave. W., it was apparent the factory began to collapse about 6:30 p.m., fire crews were evacuated from the single-storey building and continued battling the fire from outside, with four

rush hour.

Despite the size of the blaze, nearby businesses such as fast food restaurants, service stations and a health club re-

NOTICE OF PUBLIC INFORMATION CENTRE #2
WESTERN BEACHES WATERCOURSE FACILITY ENVIRONMENTAL ASSESSMENT

The Project

The Toronto Waterfront Revitalization (TWRC) and the City of Toronto (City) as co-proponents are proposing to construct the new "Western Beaches Watercourse Facility" along the Western Beaches immediately to the west of Ontario Place in response to the City having been selected to host the International Dragon Boat Federation (IDBF) Club Crew World Championships (CCWC) in 2006. The project will involve construction of approximately 650 metres of new breakwater and removal of the existing breakwater in that section.

The Process

The Project is being conducted through a Coordinated Environmental Assessment (EA) process in accordance with the requirements of the approved Municipal Class Environmental Assessment (Class EA) and the Canadian Environmental Assessment Act (CEAA). The Schedule 'C' Municipal Class EA process is being followed, which includes public and review agency consultation, an evaluation of alternatives, identification of the preferred alternative, an assessment of the potential effects associated with the project, and identification of reasonable measures to mitigate potential adverse effects. The Federal documentation requirements will be incorporated as appropriate into the Municipal Class EA documentation (an Environmental Study Report) that will be made available for review and comment at the end of the project.

A number of consultation activities and events are proposed during the project including two Public Information Centres (PICs). The first PIC was held on March 10, 2005 to introduce the project and provide an opportunity for agencies and the public to review and comment on the preliminary results to date, including the recommended solution. The second PIC is being held to present the alternative design concepts. Details for PIC #2 are listed below.

DATE: **Tuesday, April 5, 2005**
TIME: **6:00 p.m. to 9:00 p.m.**
A Presentation will be given at 7:00 p.m.
LOCATION: **Metro Hall**
Council Chambers – 2nd Floor
55 John Street

Representatives from the Project Team will be on hand to discuss the project and answer questions throughout the evening session.

Comments

The Project Team is interested in hearing any comments or concerns that you may have about this project. Comments and information regarding this project are being collected to assist the Project Team in meeting the requirements of the EA Act and CEAA. With the exception of personal information, all comments will become part of the Public Record and may be used in the Environmental Study Report.

If you have any questions or comments, wish to obtain more information about the project, or wish to be added to the project's mailing list to receive direct notification of future consultation activities and events, please contact:

Ms. Nancy Gaffney, B.Sc., Waterfront Specialist
Toronto and Region Conservation Authority
5 Shoreham Drive, Downsview, Ontario, M3N 1S4
Telephone: (416) 661-6600, Ext. 5313
E-Mail: ngaffney@trca.on.ca

For future updates on this project, please visit www.towaterfront.ca

TORONTO WATERFRONT REVITALIZATION CORPORATION

Sent by e-mail on March 24, 2005

Class EA Western Beaches Watercourse Facility Public Information Centre #2

The Toronto Waterfront Revitalization (TWRC) and the City of Toronto (City) as co-proponents are proposing to construct the new "Western Beaches Watercourse Facility" along the Western Beaches immediately to the west of Ontario Place in response to the City having been selected to host the International Dragon Boat Federation (IDBF) Club Crew World Championships (CCWC) in 2006. The project will involve construction of approximately 650 metres of new breakwater and removal of the existing breakwater in that section.

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Sincerely,

Kristin Jenkins
VP, Public Affairs

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- Brandy Lane Corporation
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- Brook McIlroy Urban Design/Pace Architects
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- Brookfield Properties Corporation
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- bt commercial realty inc.
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- Buck Consultants
- Burnac Corporation
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- c/o Joe Lobko Achitect
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- CCFEW/ Lakefront Owners
- ccr news
- CCRA
- CCRA & Centennial Rouge United Church
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- Cedar Grove Productions
- Celestica
- Cement Association of Canada
- Central Ontario Regional Council Of Carpenters Drywall and Allied Workers
- Central Waterfront Neighbourhood Association
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- CFMT-TV/Rogers
- CFRB
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- Cherry Beach Sound
- CHIN-Am and CHIN-FM
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- CIBC
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- Citizens for a Lakeshore Greenway
- Citizens for a Safe Environment
- Citizens of the Old Town
- Citizenship and Immigration Canada
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- City Formation
- City Hall Group Inc.
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- City of Calgary
- City of Mississauga
- City of New Orleans City Planning Commission
- City of Ottawa
- City of Seattle Department of Planning and Development
- City of Toronto
- City of Toronto - City Cycling and Sustainable Transportation
- City of Toronto - Historic Fort York
- City of Toronto - Let's Build
- City of Toronto - Parks & Recreation
- City of Toronto - Parks and Planning
- City of Toronto - Tourism Division
- City of Toronto - UPDS - Planning
- City of Toronto - Urban Development Services
- City of Toronto - Waterfront Secretariat
- City of Toronto (Medical Officer of Health)
- City of Toronto (P&D)
- City of Toronto (UDS)
- City of Toronto Better Building Fund
- City of Toronto Children's Services
- City of Toronto Councillor
- City of Toronto Cycling Committee
- City of Toronto Economic Development Division
- City of Toronto Fire Services Marine
- City of Toronto Parks and Recreation
- City Of Toronto Toronto Island ferry
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- Don Task Force
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- ERA Architects
- ETC... News
- Etobicoke Guardian
- Evergreen
- Evergreen Common Grounds
- Evergreen Foundation
- Evironment Canada
- Exhibition Place
- Faculty of Architecture Landscape and Design
- Faculty of Architecture PESCARA ITALY Departement Infrastructure Design Engineering Architecture
- Faculty of Environmental Studies York University
- Fandel Associates
- Farrow Partnership Archiects Inc
- Fasekn Martineau DuMoulin
- Fatal Light Awareness Program
- Feature Factory Design Build
- Federal Government
- Federation of Canadain Municpalities
- Federation of Ontario Naturalists
- Feet on the street
- Fengate Property Management Ltd.
- Ferrovial Agroman Canada Inc
- Field Sports Groups / Friends of Athletic Fields
- Film Ontario
- First Contact
- Formerly with Kodak Canada Inc.
- FRAM Building Group
- Franz Environmental Inc.
- Freelance travel writer and former town planner
- freelance writer
- Friend of Athletics Fields
- Friends of Fort York
- Friends of the Don East
- Friends of the Lower Don
- Friends of the Spit
- frreelance writer
- FutureFun Consultants
- FVB Energy Inc.
- G.RYAN DESIGN INC
- G/L Task Force Toronto Island COmmunity Assoc.
- Gardiner Lakeshore Task Force
- Garrison Creek Linkage Project
- Garrison Flats Community Garden
- Gartner Group Inc.
- Gd and Associates
- Genivar
- Gente Modesta
- George Brown College
- Geospace Planetarium
- Gibbal Consulting
- Glen & Associates Inc.
- Global
- Globe and Mail
- GO Transit
- Golder Associates Ltd.
- Gooderham & Worts Neighbourhood Association
- Goodman Carr
- Gord! Fix my stuff.
- Gowlings
- Graywood Developments Ltd.
- Graziana + Corraza
- Great Gulf Homes
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- Great White North Communications Inc./ Dragon Boat Club
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- Green Alternative
- Green Parks of Ontario
- Green Party
- Green Tourism Ass'n
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- HCCA
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- Inverstor Digest
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- Italian Chamber of Commerce of Canada
- j j barnicke limited insignia
- J.J.Barnicke Limited
- Jack Layton MP Toronto-Danforth
- Jacques Whitford
- Jenneric Design
- JJ Barnicke
- journalism-broadcasting student
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- Kaieteur Institute For Knowledge Management
- Karson Group
- KCAP
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- Labourers' International Union of North America: Local 183
- LAD
- Lafarge Canada Inc.
- Laidlaw
- Lake Ontario Fast Ferry
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- LCBO
- Le Metro Courrier
- LEA Consulting Ltd.
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- Ministry of Culture
- Ministry of Economic Development and Trade
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- Ministry of Public Infrastructure Renewal
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- Mnemo
- MNR
- MOE
- Molly Brown Enterprises
- Monarch
- Montgomery Sisam Architects Inc.
- moody's investors service
- Mooredale Sailing Club
- Morguard
- Moriyma & Teshima Architects
- Morrison Hershfield Limited
- Moveable - Liberty Village BIA
- MPCI
- MPIR
- MTCC 1371
- MTO
- Municipal Affairs Consulting
- Municipal Property Assessment Corp
- Mustard Seed
- Muzzo Companies
- N. Barry Lyon Consultants Limited
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- Nathan Good Architect
- National Federation of The Blind/Advocates for Equality
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- NBLC
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- Neighbour Arcadia
- Nexfor Inc
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- Niagara Neighbourhood Association
- Nikkei Times
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- Northern Horizons Construction and Development Co
- Now Magazine
- O.A.L.A City of Mississauga Community Services
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- Obsession III Yacht Charters
- OCETA
- Office for Urbanism
- Office of George Smitherman MPP
- OHCC
- Ont. Growth Secretariat
- Ontario Association of Landscape Architects
- Ontario Clean Air Alliance
- Ontario Cricket Association
- Ontario Hydro
- Ontario March of Dimes
- Ontario Media Development Corporation
- Ontario Medical Association
- Ontario Mile Corporation Raceway
- Ontario Ministry of Culture
- Ontario Ministry of Economic Development & Trade
- Ontario Ministry of Natural Resources
- ONTARIO MINISTRY OF TRANSPORTATION
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- Owens Realty
- OWN Co-op
- Oxford Properties
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- Panchi Consulting
- Paperboard Industries Corporation
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- Parkdale/Liberty Economic Dev. Corp.
- Parks Canada
- PARKWAY REALTY LTD.
- Pasquali Dall´Igna & associates
- Patrides
- Paul H. Scrivener & Associates
- PAUL WU & ASSOCIATES LANDSCAPE ARCHITECTS
- PCA
- PCL/Aecon Joint Venture
- Penreal Capital
- PEO
- Personal
- Peto MacCallum Ltd.; Consulting Egineers
- PG Bell inc.
- PGM Design Associate
- Phanrom Electron Corporation
- Pierre St-Cyr Urban Planner
- Pioneer Cruises
- PIR
- Planetarium Renaissance Group
- Planner
- Planning & Engineering Initiatives Ltd
- Planning Action
- Platform Computing
- Plazacorp Investment Ltd
- Plus Ultra
- PMA Brethour Group
- PMP Associates Inc
- POLLARA
- Pollution Probe
- Polycor Granite Bussiere
- Pond Aggregates
- Port Union Homeowners Association
- Portland Community Forum
- Portlands Citizens Action Committee
- Portlands Partnership
- porto university architecture faculty
- PRAnderson Construction Arbitration Services
- President SLCRA; Director SLNA; Director SEDERI
- PRICE CONSTRUCTION MANAGEMENT SERVICES
- Prudential- First Choiuce Realty
- PS Production Service Ltd.
- Public Committee for Safe Sewage
- Public infrastructure Renewal
- Puerto Rico Department of Natural and Environmental Resources
- PWL Partnership Landscape Architects
- QQ Terminal - Retail mangagement
- Quantex Technologies
- Quatic Sailing club
- Queen East Business and Residents Association
- Queen-Broadview Village BIA Toronto Historical Ass'n
- Queens Quay Disabled Sailing Program
- Queen's Quay Yachting
- Queen's University
- R.V. Anderson Associates Limited
- Rail Air International Ltd
- Ralph Thornton Centre
- Ramland Limited
- RBC Dominion Securities
- RBC Global Services
- RCDI
- RE/MAX Realty Group
- Redpath Sugars
- Reed Construction Data
- Representative for Dragonboat Canada
- Research Group
- research western
- Resilient Channel
- re-source ontario
- reuters
- Rice Brydone Limited
- Richard Ivey School of Business
- Richard Ziegler Architect
- Rideau Bulk Terminals Inc.
- Rigbe's Quarry - Decorative Limestone
- River Oaks Group
- Riverdale Community Business Centre
- Riverdale Community Development Institute c/o Ralph Thornton Centre
- RM Group
- RMIT
- Robert B. Somerville
- Rocket Riders - Toronto Environmental Alliance
- Rockport Construction Sevices Inc
- Rockport Group
- Rodger Todhunter Associates Inc
- Rogers Community Television (Scarborough)
- Rouge Valley Foundation
- Row Ontario
- Rowing CAnada
- Royal Bank of Canada (RBC Capital Markets)
- Royal Canadian Yacht Club or Page and Steel
- Royal LePage Commercial Inc
- Royal LePage Real Estate ICI
- Royzell Developments Inc.
- Rupert Crighton Marine Engineering
- Ryerson University
- Saatchi & Saatchi
- Saint James Condo
- Salter Farrow Pilon Architects Inc
- Samuel & Son
- SavorLife
- Scarlett Heights Entreprenurial Academy
- School of Urban and Regional Planning Queen's University
- Scotiabank Manager Executive Offices Audit Department
- SEACOR Environmental Inc.
- SeaWell Services International GmbH
- SEDERI
- Seneca College
- SENES Consultants Limited
- SETIAO
- Several construction magazines
- Sharp & Diamond Landscape Architecture & Plannning
- shb
- Sheffield Hallam University
- Shore Tilbe Irwin & Partners
- Showline Limited
- Sierra Club of Canada & Toronto Renewable Energy Cooperative
- Sightell Productions Inc.
- Sinpyeong Architects & Associates
- SLCRA
- SLNA
- Smith Company Commercial Real Estate Inc.
- SNC - Lavalin Inc.
- Sokol Toronto
- Solo Enterprises
- Solomon E.T.C.
- Somerset Chev orvette
- Sorensen Gravely Lowes
- Soskolne Associates
- Sounds Virtual Inc.
- South Beach Condos
- South East Downtown Neighbourhood Alliance
- South Parkdale Residents Alliance
- South Riverdale Community Health Centre - South Riverdake Oartnership
- South Riverdale Revitalization Project
- South Rosedale Ratepayers' Association
- Southbeach Town Home Association
- Spectrum
- Spencer Golf Concepts
- SPH Planning & Consulting Ltd.
- sportalliance
- Squamish Waterfront Development Corporation
- St Lawrence Community Centre
- St Lawrence Neighbourhood Association
- St. James Town Sailing Club
- St. Lawrence Condos Ratepayers Association
- St. Lawrence Market BIA SEDERI
- St. Lawrence Neighbourhood Association
- St. Lawrence Neighbourhood Community Bulletin
- St. Lawrence on the Park
- St. Mary's Cement Inc.
- St. Paul Guarantee
- State Building Corporation
- Step Stones to the Don
- Sterling Finlayson Architects
- Stikeman Elliott
- STOCHASTIC RESEARCH ENTERPRISES
- Stolport Corporation
- Strada Aggregates

Notice of Public Information Centre No. 2 E-mail Recipients

- Strategy Institute
- StreetPrint Decorative Asphalt Distributers
- Studio 226 / StudioWorks
- Suimon Engineering Canada Ltd.
- Sultan Cooperative
- Sunarts Design
- Sunnybrook Hospital
- SUPERIOR TRAIL BRIDGES INC.
- Suportive Housing Coalition of Metro Toronto
- Sussex Strategy Group
- Sustainable Edge Inc.
- Sutton Associates
- Sutton Group Reality
- Sweeney Sterling Finlayson Architects
- Swimjelly Design
- Talbot Consultants
- TALES of the EARTH : Landscape Architecture
- Tandem / Corriere Canadese
- TAP
- Task Force to Bring Back the Don
- Task Force to Bring Back the Don/Don watershed Council
- TBE Group Inc.
- TCR
- TD Plannning & Development Services
- TDSB
- Teamsters Union
- TEDCO
- Teksign Inc
- Telelatino
- Telnor International Ltd
- TEV
- TFBBD
- The Annex Gleaner
- The Avro Group
- The Boston Consulting Group
- The Brand Factory
- The Caribbean Camera
- The Carlu
- The Conservatory Group
- The Daniels Corporation
- The Dentin Group
- The Docks
- The Edilcan Group
- The Globe and Mail
- The Inquirer.net (Media)
- The Jewish Tribune
- The Kirkland Partnership
- The Liberty Gleaner newspaper
- The Mississauga's of the New Credit
- The National Ballet of Canada
- The Ontario Food Terminal
- The Planning Partnership (TPP)
- The Rivers Studio LLC
- The Sheridan Institute for Technology and Advanced Learning
- The Sorbara Group
- The Toronto Star
- The Toronto Sun
- the university of waterloo
- The Varsity Newspaper
- The Voice Newspaper
- The Waterfront Regeneration Trust
- The Waterfront School
- The Workplace Safety and Insurance Board of Ontario
- Thomas Balsley Associates
- Thomas S. Mokrzycki & Associates Ltd.
- Thomson-Rogers
- Tokata LTD
- Toronto & District Cricket Ass'n
- Toronto & Region Conservation Authority (TRCA)
- Toronto Artscape
- Toronto Association of Architects
- Toronto Atmospheric Fund - Clean Air Partnership
- Toronto Baseball Ass'n
- Toronto Bay Initiative
- Toronto Beaches Lacrosse Club
- Toronto Bicycling Network
- Toronto Board of Trade
- Toronto Brigantine
- Toronto Building Exchange
- Toronto Central Sports & Social Club
- Toronto Chinese Business Assoc.
- Toronto Community Housing Corporation
- Toronto Community Ventures
- Toronto Cycling Committee
- Toronto District Heating Corp
- Toronto District School Board
- Toronto Drydock
- Toronto Eagles Soccer Club
- Toronto Economic Development Culture and Tourism
- Toronto Environmental Alliance (TEA)
- Toronto Field Hockey Club
- Toronto Field Naturalists
- Toronto Film Studios
- Toronto Harbour Liaison Council
- Toronto Hippo Tours
- Toronto Historical Association
- Toronto Hockey Field Club
- Toronto Hydro
- Toronto Hydro - Hydro substation
- Toronto Hydro Electric System
- Toronto Industry Network
- Toronto International Dragon Boat Race Festival
- Toronto International Environment Centre
- Toronto Intl DB Festival
- Toronto Island Bird Observatory
- Toronto Island Community Assoc.
- Toronto Island Sailing Club
- Toronto Island Trust
- Toronto Islands
- Toronto Life Magazine
- Toronto Military Hertiage Association (RCMI)
- Toronto Multihull Cruising Club
- Toronto Ornithological Society
- Toronto Parks Foundation & Urban Strategies
- Toronto Pedestrian Committee
- TOronto Police
- Toronto Police Services Marine Unit
- Toronto Port Authority
- Toronto Public Health Environmental Health Unit
- Toronto Public Library
- Toronto Real Estate Board
- Toronto Renewable Energy Cooperative/Windshare
- Toronto Rugby Union
- Toronto Services Soccer League
- Toronto Soccer Association
- Toronto Society of Architects
- Toronto Sports council
- Toronto Star
- Toronto Sunday Sun
- Toronto Theatre Alliance
- Toronto Tours
- Toronto Transit Commission
- Toronto Ultimate Club
- Toronto Water Pollution Control
- Toronto Windsurfing Club
- Toronto WR Sailing Club
- Toronto/York Region Labour Council
- Torotno Bay Initiative
- Torys LLP
- Total Lighting Solutions Inc
- Tourism Toronto
- Town & Country Buffet Restaurants
- Town of Fort Erie
- Trader Media Corporation
- Trailblazer
- TransCanada
- Transport 2000 Scarborough
- Transport Canada
- Transportation Action Now Inc.
- TREB
- Tridel Corporation
- Trillium Ridge Consultants & Associates
- Trout Unlimited
- Twister Contract Administration
- U P Concepts
- ULI--the Urban Land Institute
- UNIS LUMIN
- United Rentals of Canada
- United Way of Greater Toronto
- Universal Workers Union Loc. 183
- University of Calgary
- University of Cambridge England
- University of Guelph
- University of Guelph School of Hospitality and Tourism Management MBA
- University of Michigan Ann Arbor MI USA
- University of Toronto Architecture Landscape and Design
- University Of Trier Germany
- University of Utrecht
- University of Waterloo
- University of Western Ontario
- Urban Affairs Library
- Urban Capital Property Group
- Urban Design Asscoiates
- Urban Development Institute/Ontario
- Urban Intelligence
- Urban Strategies Inc.
- Urbancorp
- URS Canada Inc.
- Van Buskirk
- vancouver park board
- Various
- vern campbell real estate limited
- Vertechs Design
- Viacom Outdoor
- Voice
- Vorecco Ltd.
- Walker Nott Dragicevic Associates
- Wallace Roberts & Todd LLC
- Water Rats Sailing Club
- Waterfront Action
- Waterfront Owners Rights [WOR]
- Waterfront Regeneration Trust
- Waterside Tennis Courts
- Wayne state University University of Michigan-Dearborn
- WDI
- WeirFoulds LLP
- WES Transportation Infrastructure Planning
- West 49 Parallel Design Inc
- West Don Lands Committee
- West Gate Residents' Assoc.
- West Marine
- West Rouge Sports & Recreation Assoc.
- Western Management Consultants of Ontario
- Westwood
- Westwood Sailing Club
- whc
- Wheel Excitement Inc
- Wihington Properties
- Wilson Vukelich LLP
- WND
- WoodGreen Community Services
- Woodgreen United Church
- Woodington Properties
- Works and Emergency Services
- World Journal Daily News
- World Wildlife Fund Canada
- World Youth Centre
- WRCA
- WZMH Architects
- Yankee lady
- Yolles
- Yolles Partnership Inc.
- York University
- youth soccer
- ZAS Architecture
- Zeilder Partnership

Appendix I

PIC No. 2 Display Materials and Presentation Slides

Welcome to the Western Beaches Watercourse Coordinated EA Public Information Centre #2

April 5, 2005

- Please sign in on the sheet provided so that we will have a record of your attendance. Then feel free to walk around and view the displays.
- **A presentation will commence at 7:00 p.m.**
- If you have any questions, the Project Team Members will be pleased to discuss them with you.
- Comment sheets are provided for those who wish to provide their comments in writing. Please place your completed comment sheets in the Comment Box or mail/fax them to Nancy Gaffney (contact information below) by **April 22, 2005**.
- Thank-you for your involvement in this project.
- For additional information, please contact the following Project Team Member:

Nancy Gaffney
Toronto Region Conservation Authority
5 Shoreham Drive
Toronto, ON M3N 1S4
Tel: (416) 661-6600 Ext.5313
Fax: (416) 667-6278
E-mail: ngaffney@trca.on.ca

Project History

- The City of Toronto has been selected as the host city for the International Dragon Boat Federation (IDBF) Club Crew World Championship (CCWC) in 2006.

- There were three conditions attached to the City of Toronto bid award:

  1. The award is conditional on the City building a new public access watercourse facility at the Western Beaches, just west of Ontario Place.

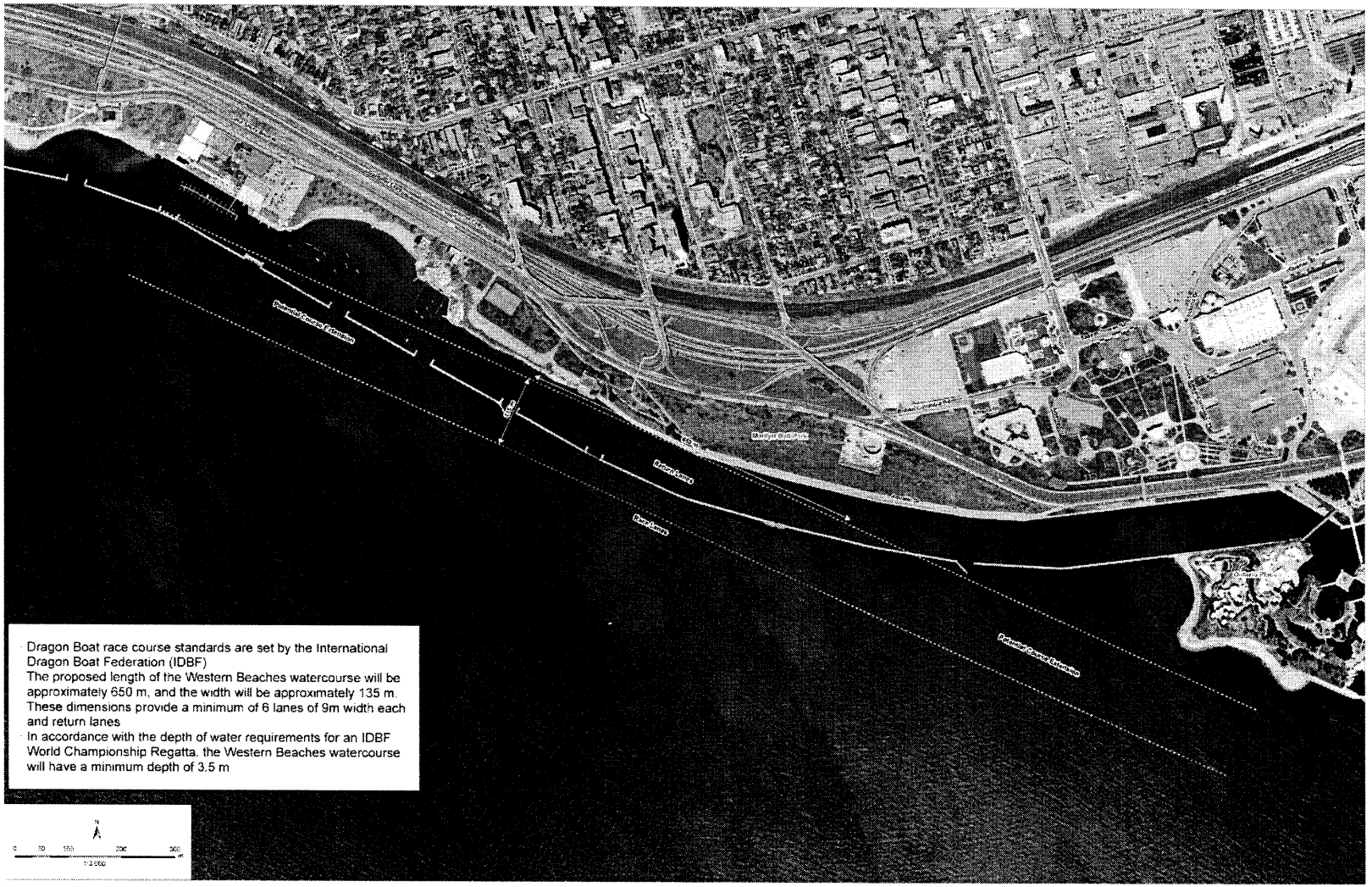
  2. The new venue must be ready for use before June 1, 2006.

  3. The federal government's commitment for funding be in-place by September 30, 2004. (Complete)

- To ensure that the City could meet the first two conditions, the Toronto Waterfront Revitalization Corporation (TWRC) prepared a study entitled "Dragon Boat Course Feasibility Study - Final Report" in September of 2004.

- The Feasibility Study concluded that the watercourse could be built on time with the available funding and the project was started.

The New Western Beaches Watercourse



Requirements for the New Watercourse

- In order for the new watercourse to be ready for use before June 1, 2006, the following requirements need to be undertaken:
  - Construction of a new breakwater (subject to the Municipal Class Environmental Assessment (Class EA) as a Schedule 'C' activity)
  - Building of ancillary facilities
- The existing breakwater within the new watercourse will be removed.

Overview of the Coordinated Environmental Assessment Process

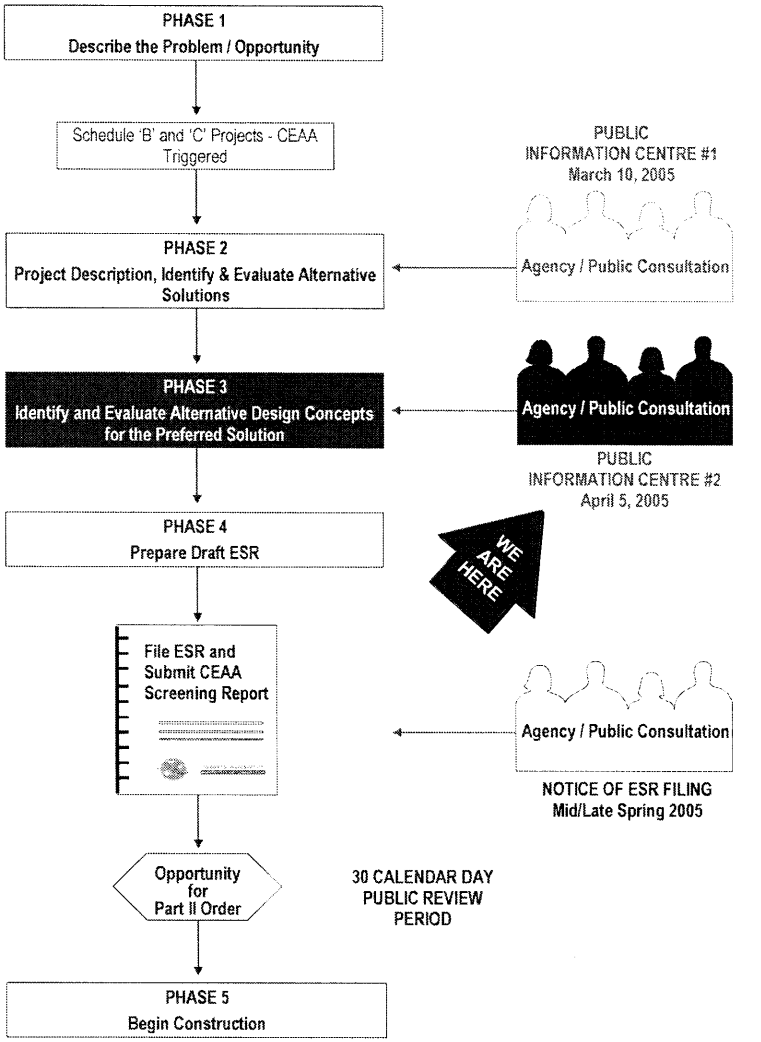
- This project is being conducted through a **Coordinated Environmental Assessment** process in accordance with the requirements of both the approved **Municipal Class EA** and the **Canadian Environmental Assessment Act (CEAA).**

- The Municipal Class EA is approved under the *Environmental Assessment Act* and enables the planning of municipal infrastructure projects in accordance with a proven procedure for protecting the environment.

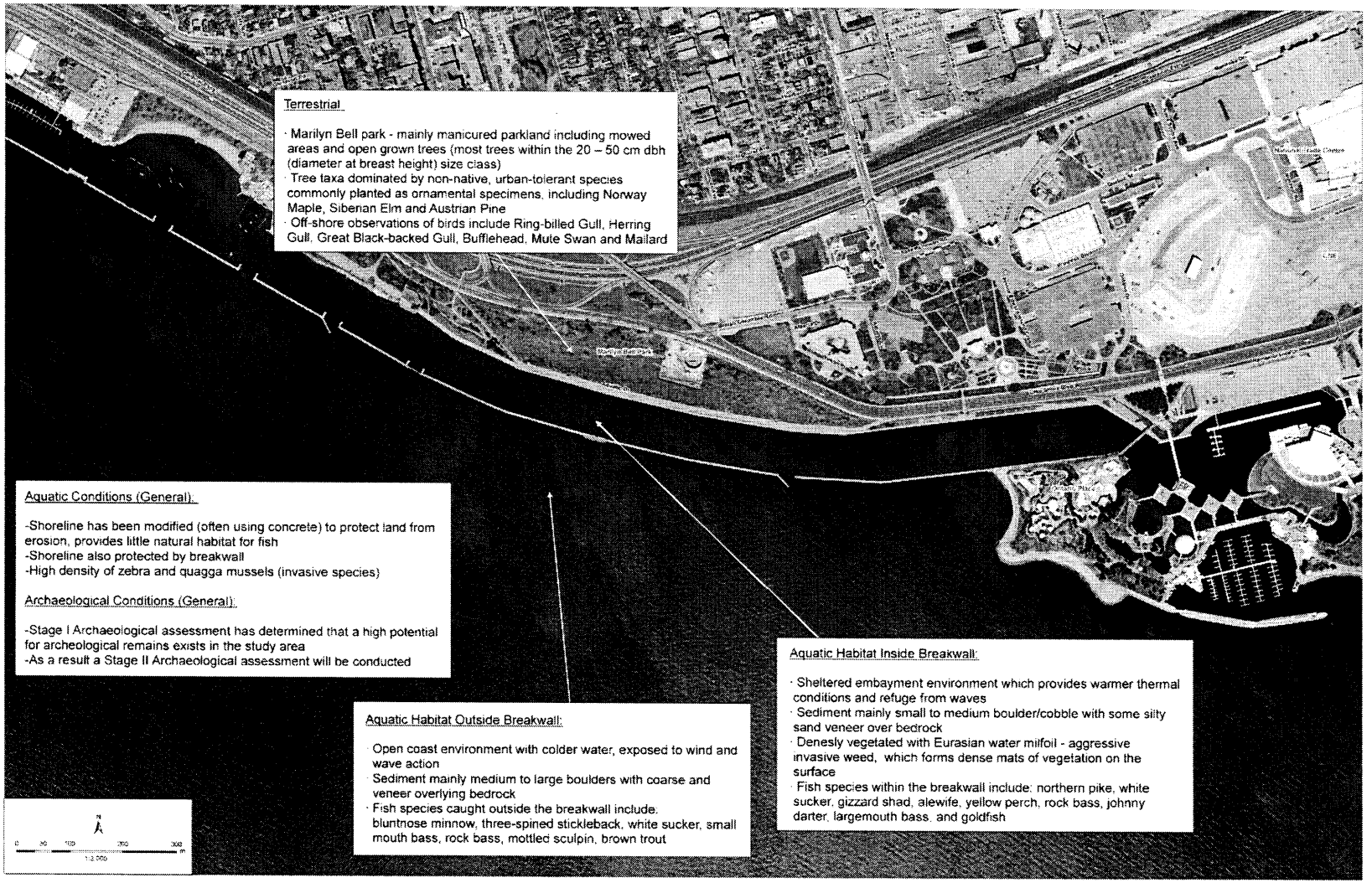
- The Schedule 'C' Class EA process includes public and review agency consultation, an evaluation of alternatives, an assessment of the effects on the environment, and identification of reasonable measures to mitigate any adverse effects.

- The public notice of filing the ESR will become the Notice of Completion for the project.

- The ESR will include all CEAA documentation requirements and will be submitted to the Canadian Environmental Assessment Agency (functioning as the federal environmental assessment coordinator).



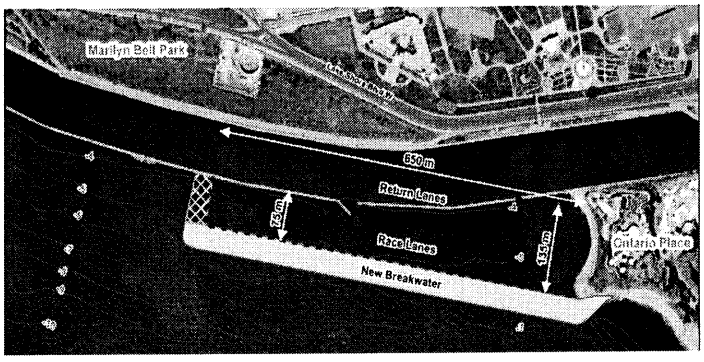
Existing Conditions



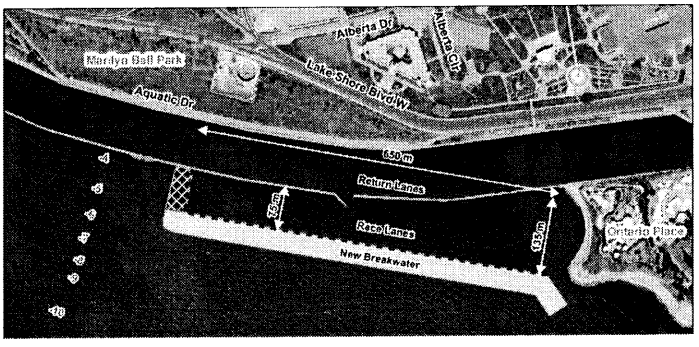
Alternative Breakwater Solutions

1. **Do Nothing: No new breakwater would be built (acts as a comparative benchmark).**

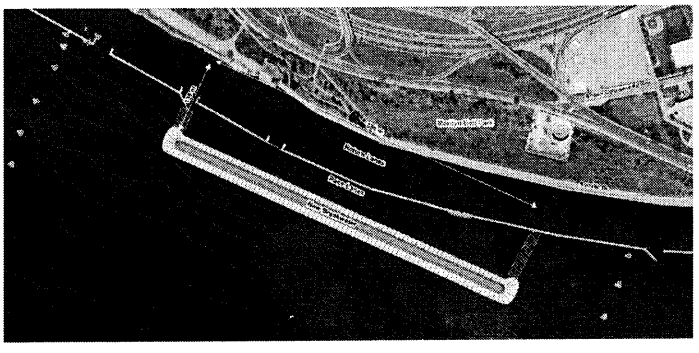
2. **Build a New Breakwater: Connected to Ontario Place**



3. **Build a New Breakwater: Not Connected to Ontario Place**



4. **Build a New Breakwater: Off Marilyn Bell Park**



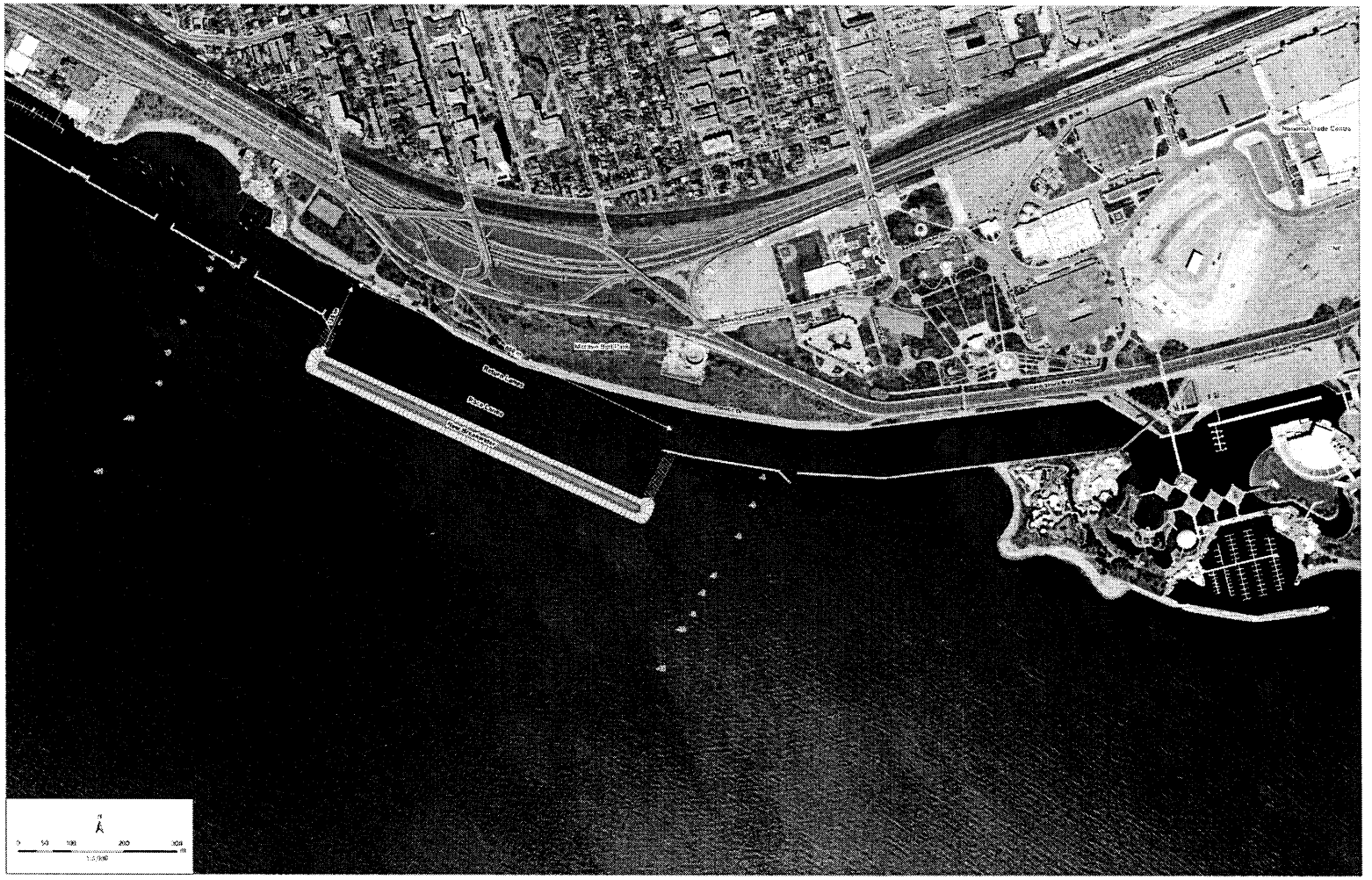
Based on input received at PIC# 1, Alternative Solution # 4 – Off Marilyn Bell Park was developed and included in the evaluation of alternative breakwater solutions

Comparative Evaluation Summary of the Alternative Breakwater Solutions

Category of Consideration / Evaluation Criteria	Alternative Solution No. 1 Do Nothing	Alternative Solution No. 2 Connected to Ontario Place	Alternative Solution No. 3 Not Connected to Ontario Place	Alternative Solution No. 4 Off Marilyn Bell Park
TECHNICAL				
Potential ability of breakwater to protect watercourse from waves.	Provides no wave protection for entire watercourse.	Provides wave protection for entire watercourse.	Provides wave protection for most of watercourse except for eastern end (starting area) requiring the need for additional wave protection at this location.	Provides wave protection for entire watercourse.
Potential length of new breakwater.	No new breakwater.	Shortest length of new breakwater needed to be constructed plus potential closure at west end is 85 m long.	Longer length of new breakwater needed to be constructed plus potential closure at west end is 85 m long.	Shortest length of new breakwater needed to be constructed plus potential closure at west end is 55 m long and potential closure at east end is 110 m.
Potential for possible future public access along new breakwater.	No possible future public access provided.	Possible future public access provided via direct connection to Ontario Place.	Possible future public access would require a bridge or causeway structure to be built from Ontario Place.	Possible future public access would require a bridge to be built from the shore to the breakwater.
Potential need to modify Cowan Avenue outfall.	No modification required.	Modification required.	Modification required.	No modification required.
NATURAL ENVIRONMENT				
Potential long-term effects on existing aquatic features.	No long-term effects on aquatic features.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.	Potential negative long-term effects on aquatic features would be compensated through habitat restoration and creation resulting in a net positive effect.
Potential effects on water quality within the watercourse.	Water quality within the watercourse remains unchanged.	Greater potential for reduced water quality within watercourse due to lack of water circulation because breakwater would be connected to Ontario Place and potentially closed at west end. This may be mitigated through the placement of pipes in the new breakwater to increase water circulation.	Less potential for reduced water quality within watercourse because eastern end of breakwater would not be connected to Ontario Place.	Greater potential for reduced water quality within watercourse due to lack of water circulation because breakwater would be potentially closed at east and west ends. This may be mitigated through the placement of pipes in the new breakwater to increase water circulation
Potential for short-term construction related effects on aquatic features.	No short-term construction related effects on aquatic features.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.	Potential for short-term construction related effects on aquatic features (e.g., increase sedimentation, turbidity) would be minimized through the use of turbidity curtains and by observing fisheries timing windows.
Potential for short-term construction related effects on migratory birds.	No short-term construction related effects on migratory birds.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.	Minor short-term disruption to stop-over / roosting areas in the vicinity of construction activities.
Potential effects on existing terrestrial features.	No effects on terrestrial features.	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).	Removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) would be mitigated through replacement (like-for-like on a one-for-one basis).
SOCIAL ENVIRONMENT				
Potential short-term construction related effects on existing area residents, businesses, and/or events.	No short-term construction related effects on existing area residents, businesses, and/or events.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.	Short-term construction related effects on existing area residents, businesses, and/or events would be minimized through the use of standard construction measures and schedule optimization.
Potential effects on existing quiet water area for paddlers/rowers.	Existing quiet water area remains unchanged.	Largest quiet water area would be created for use by paddlers/rowers with closures at ends of breakwater.	A larger quiet water area would be created for use by paddlers/rowers.	Largest quiet water area would be created for use by paddlers/rowers with closures at ends of breakwater.
Potential effects on boat access to Ontario Place marina.	Boat access to Ontario Place marina remains unchanged.	Ontario Place marina access relocated to the west end of the new breakwater. Requires management of boats entering marina during course events.	Ontario Place marina access relocated to between end of new breakwater and Ontario Place shoreline. Requires management of boats entering marina during course events.	Boat access to Ontario Place marina remains unchanged.
Potential flexibility to accommodate future events.	No flexibility to accommodate future events.	Less flexibility to accommodate future events.	Less flexibility to accommodate future events.	Greatest flexibility to accommodate future events.
CULTURAL ENVIRONMENT				
Potential effects on underwater cultural/heritage resources.	No potential negative effects on underwater cultural/heritage resources.	Potential underwater cultural/heritage resources being determined through a Stage 2 Archaeological Assessment.	Potential underwater cultural/heritage resources being determined through a Stage 2 Archaeological Assessment.	Potential underwater cultural/heritage resources being determined through a Stage 2 Archaeological Assessment.
FINANCIAL				
Potential capital costs associated with the alternative.	No capital costs.	Less than Alternative #3 but more than Alternative #4 (detailed costing to occur once design has been finalized).	Most expensive (detailed costing to occur once design has been finalized).	Least expensive (detailed costing to occur once design has been finalized).
RANKING OF SOLUTIONS	**FOURTH**	**SECOND**	**THIRD**	**Preferred**

The Preferred Breakwater Solution

Alternative Solution #4: Build a New Breakwater – Off Marilyn Bell Park



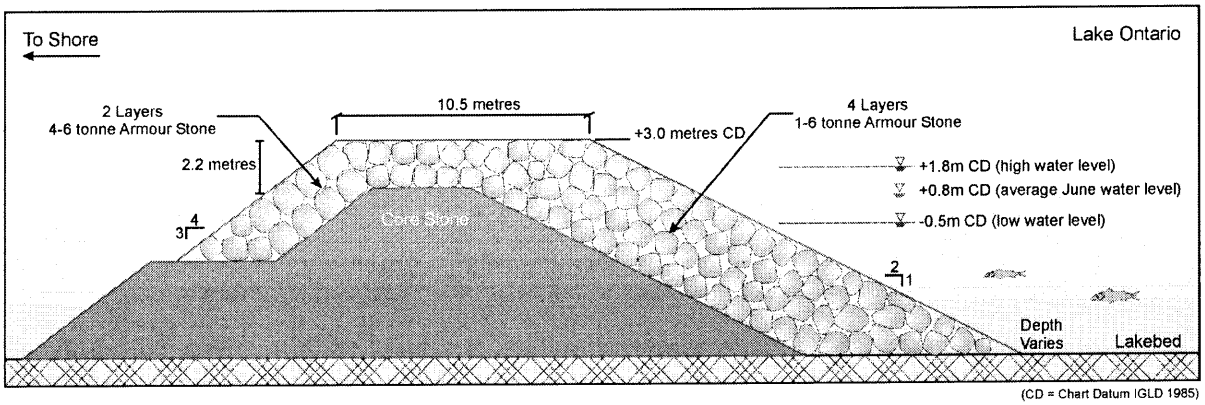
Rationale for the Preferred Solution

New Breakwater – Alternative Solution #4: Off Marilyn Bell Park

- Shortest breakwater length resulting in the shortest construction time.
- Realignment of Cowan Avenue outfall not required.
- Boat access to Ontario Place marina remains unchanged.
- Least expensive (detailed costing to occur once design has been finalized).
- Greatest potential to function as a multi-sport facility.

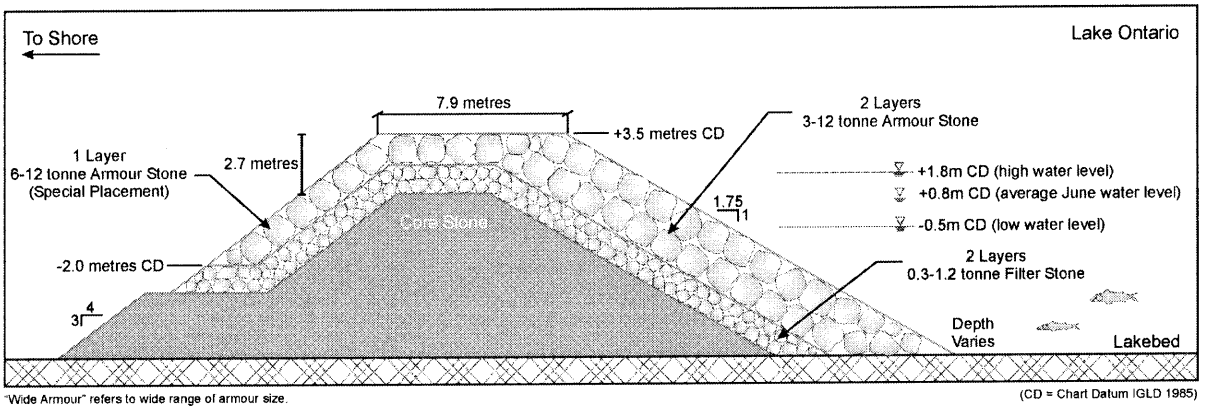
Alternative Breakwater Designs

1. Alternative Design #1: Rubble Mound Berm Concepts



(CD = Chart Datum IGLD 1985)

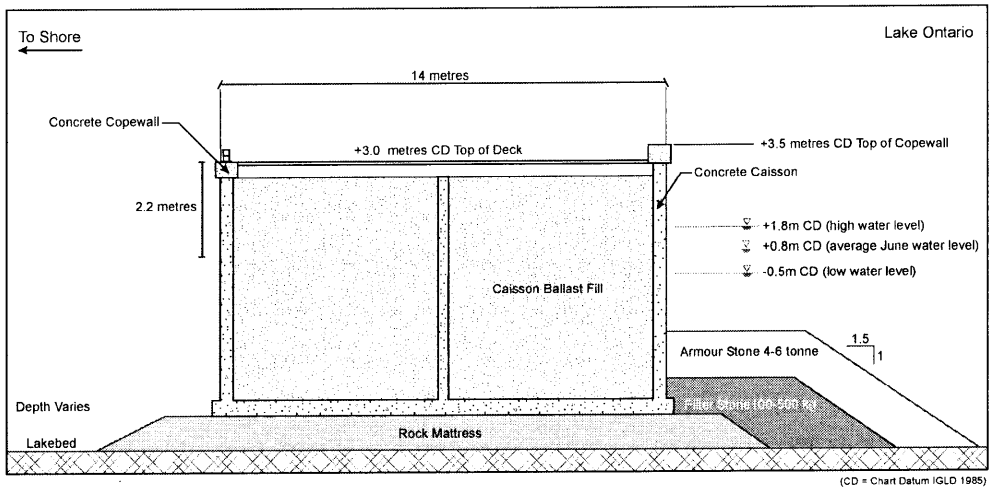
2. Alternative Design #2: Rubble Wide Armour Concept



"Wide Armour" refers to wide range of armour size.

(CD = Chart Datum IGLD 1985)

3. Alternative Design #3: Vertical Wall Concrete Caisson Concept



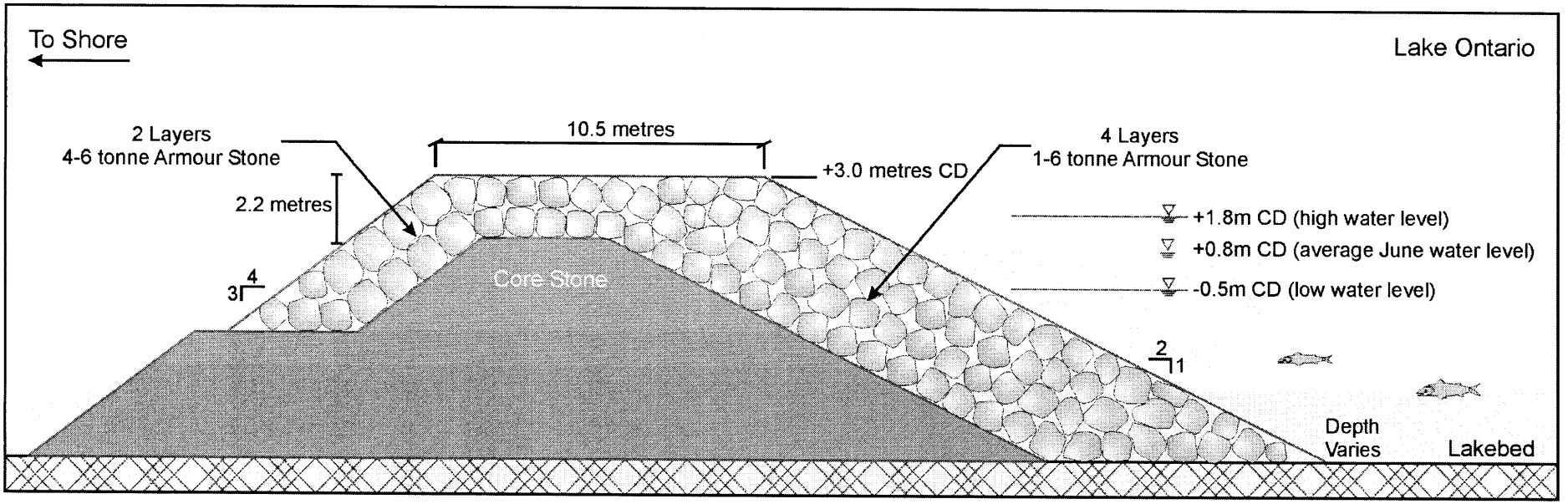
(CD = Chart Datum IGLD 1985)

Comparative Evaluation Summary of the Alternative Breakwater Designs

Category of Consideration / Evaluation Criteria	Alternative Design #1 Rubble Mound Berm Concept	Alternative Design #2 Rubble Mound Wide Armour Concept	Alternative Design #3 Vertical Wall Concrete Caisson Concept
TECHNICAL			
Potential breakwater performance	Higher breakwater performance (very good wave overtopping and wave transmission characteristics and very flexible structure with good reserve capacity (damage is progressive if design conditions exceeded)).	Higher breakwater performance (very good wave overtopping and wave transmission characteristics and very flexible structure with good reserve capacity (damage is progressive if design conditions exceeded)).	Lower breakwater performance (good wave transmission characteristics, but greater wave overtopping rate and rigid structure (damage is more sudden if design conditions exceeded)).
Potential construction techniques.	Conventional construction can be land-based or marine-based or combination.	Conventional construction can be land-based or marine-based or combination. . Requires more rigorous placement tolerances than berm concept and therefore more susceptible to construction downtime due to adverse weather conditions.	Marine-based construction only. Forming, launching and placing caissons have not been routinely carried out.
Potential for meeting material supply requirements.	Easier to meet material supply requirements (very large volume of armour stone and core stone required, but smaller size of armour required (1 to 6 tonne stones) which is easier to source than larger stones).	More difficult to meet material supply requirements (very large volume of armour stone and core stone required and larger size of armour required (3-12 tonne stones) which is more difficult to source than smaller stones).	Easier to meet material supply requirements (concrete and reinforcing steel have well-established sources, but large volume of caisson ballast stone required).
Potential for wave reflection within the watercourse	Lower wave reflection because of rough, permeable, sloping face of breakwater.	Lower wave reflection because of rough, permeable, sloping face of breakwater.	Higher wave reflection because of.smooth, impermeable vertical wall of breakwater.
NATURAL ENVIRONMENT			
Potential loss of fish habitat	Largest loss of fish habitat, but would be compensated through habitat restoration and creation resulting in a net positive effect.	Second largest loss of fish habitat, but would be compensated through habitat restoration and creation resulting in a net positive effect.	Smallest loss of fish habitat, but would be compensated through habitat restoration and creation resulting in a net positive effect.
Potential for incorporating fish habitat compensation measures into the breakwater structure.	Good potential because of sloped, rocky sides.	Good potential because of sloped, rocky sides.	Least potential because of vertical, smooth sides.
Potential effects on existing terrestrial features.	Greater removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs), but would be mitigated through replacement (like-for-like on a one-for-one basis).	Greater removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs), but would be mitigated through replacement (like-for-like on a one-for-one basis).	Less removal of/disturbance to terrestrial features from construction staging requirements (i.e., grass, trees, shrubs) and would be mitigated through replacement (like-for-like on a one-for-one basis).
SOCIAL ENVIRONMENT			
Potential short-term construction related effects on existing area residents, businesses, and/or events.	Greater short-term construction related effects on existing area residents, businesses, and/or events, but would be minimized through the use of standard construction measures and schedule optimization.	Greater short-term construction related effects on existing area residents, businesses, and/or events, but would be minimized through the use of standard construction measures and schedule optimization.	Less short-term construction related effects on existing area residents, businesses, and/or events and would be minimized through the use of standard construction measures and schedule optimization.
FINANCIAL			
Potential capital costs associated with the alternative.	Approximately 5% greater than Alternative No. 2 (cost could increase due to limitations in stone supply).	Least cost provided large armour stone supply is available (greatest potential for stone sourcing difficulties and associated costs).	Approximately 10% greater than Alternative No. 2.
RANKING OF SOLUTIONS	**Recommended**	**Second**	**Third**

The Recommended Breakwater Design

Alternative Design #1
Rubble Mound Berm Concept



(CD = Chart Datum IGLD 1985)

Rationale for the Recommended Breakwater Design

Alternative Design #1: Rubble Mound Berm Concept

- Same breakwater performance as Alternative #2 and higher than Alterntive #3 (very good wave overtopping and wave transmission characteristics and very flexible structure with good reserve capacity).

- Same wave reflection as Alternative #2 because of rough, permeable, sloping face of breakwater and lower than Alternative #3.

- Easier to meet material supply requirements than Alternative #2 (very large volume of armour stone and core stone required, but smaller size of armour required).

- Conventional construction techniques can be land-based, marine-based or a combination.

- Costs 5% more than Alternative #2 and 5% less than Alternative #3.

The Next Steps . . .

- Comments received from this PIC along with those received from review agencies will be considered in selecting the preferred breakwater design.

- At the end of the project, an Environmental Study Report (ESR) will be developed to document the EA planning process followed, and the conclusions reached for the project. The ESR will also include all CEAA documentation requirements.

- The ESR will be made available for 30 calendar days to allow review agencies and the public an opportunity to review it. Notification of the ESR submission will be provided at the appropriate time.

- If you have any comments or questions following PIC #2, please forward them to the Project Manager before April 22, 2005:

Nancy Gaffney
Toronto Region Conservation Authority
5 Shoreham Drive
Toronto, ON M3N 1S4
Tel: (416) 661-6600 Ext. 5313
Fax: (416) 667-6278
E-mail: ngaffney@trca.on.ca

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Environmental Assessment

- The Project is subject to 3 Environmental Assessment processes:
  - Federal Environmental Assessment
  - Municipal Class Environmental Assessment
  - Ministry of Natural Resources Class Environmental Assessment for MNR Resource Stewardship and Facility Development Projects
- The 3 Environmental Assessment processes will be coordinated to reduce duplication.

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Municipal Class Environmental Assessment Process

- The Municipal Class EA process being followed includes:
  - Public and review agency consultation
  - An evaluation of alternatives
  - An assessment of the potential effects on the environment
  - Identification of reasonable measures to mitigate any adverse effects

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Alternative Breakwater Solutions

1. Do Nothing: No new breakwater would be built (acts as a comparative benchmark).

2. Build a New Breakwater: Connected to Ontario Place

3. Build a New Breakwater: Not Connected to Ontario Place

4. Build a New Breakwater: Off Marilyn Bell Park

TORONTO WATERFRONT REVITALIZATION CORPORATION

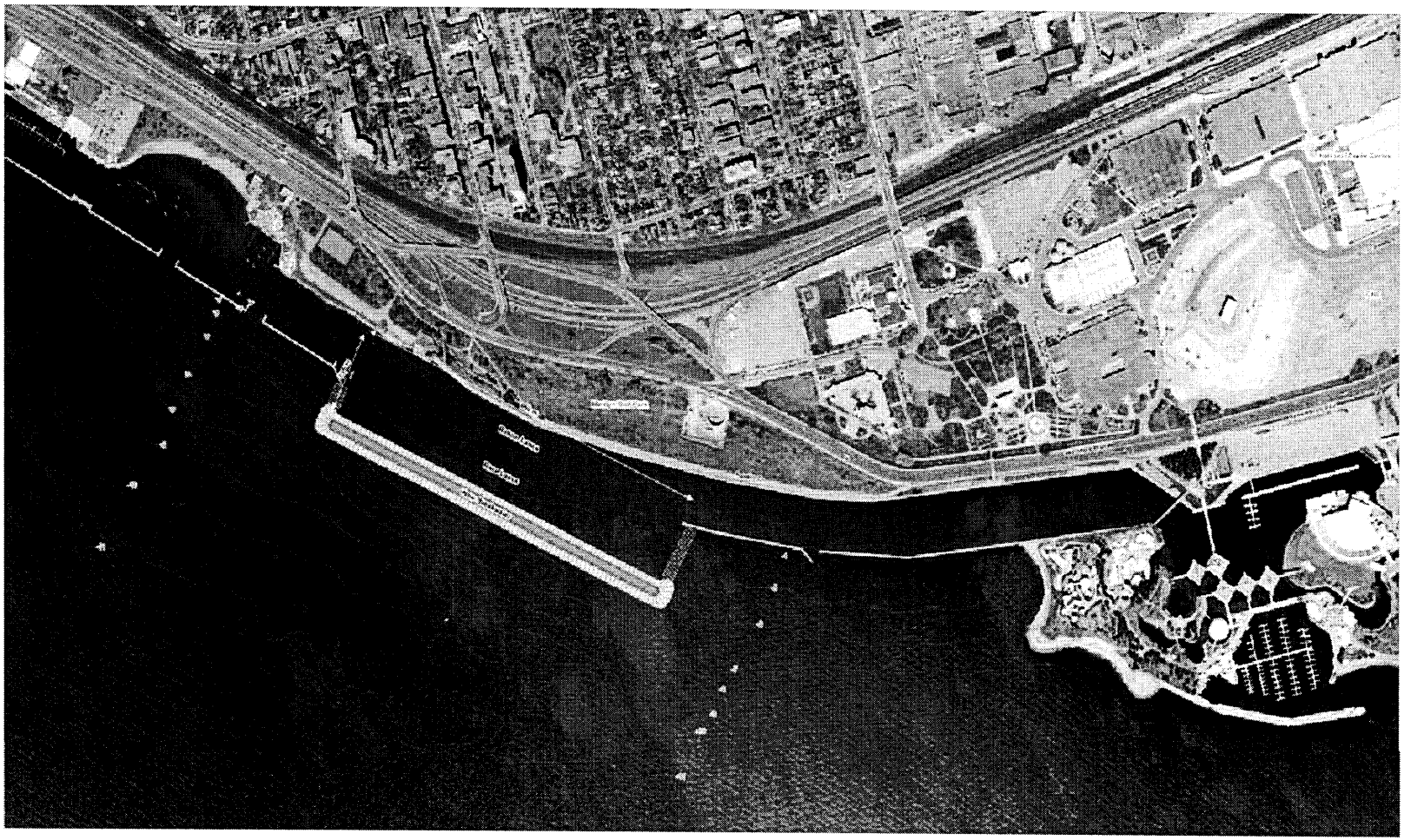
Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

The Preferred Breakwater Solution

Alternative Solution #4 – Build a New Breakwater: Off Marilyn Bell Park



TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Rationale for the Preferred Solution

Alternative Solution #4 – Build a New Breakwater: Off Marilyn Bell Park

- Shortest breakwater length resulting in the shortest construction time.
- Modification of Cowan Avenue outfall not required.
- Boat access to Ontario Place marina remains unchanged.
- Less expensive than Alternative Solution #3 and same cost as Alternative #2.

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Further Rationale for the Preferred Solution

Alternative Solution #4 – Build a New Breakwater: Off Marilyn Bell Park

- Greatest potential to function as multi-sport facility.
- Addresses more of the existing breakwater which is in poorer condition
- Continues to incorporate Marilyn Bell Park for adjacent public space
- Does not impede the 4 km training course

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Breakwater Design Characteristics

- Robust, durable and structurally stable under year-round design conditions
- Limited wave overtopping & transmission at the course
- Minimized cost considering material availability, construction methodology and schedule
- Adaptable to allow future access along the crest

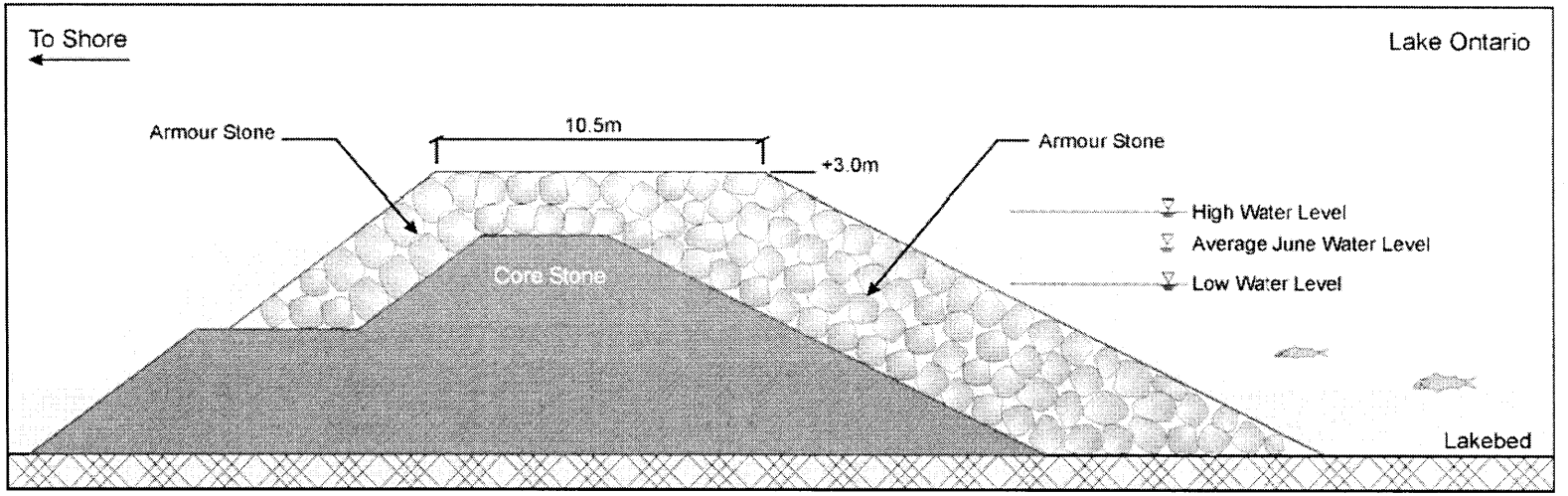
Western Beaches Watercourse Coordinated EA

Public Information Centre #2

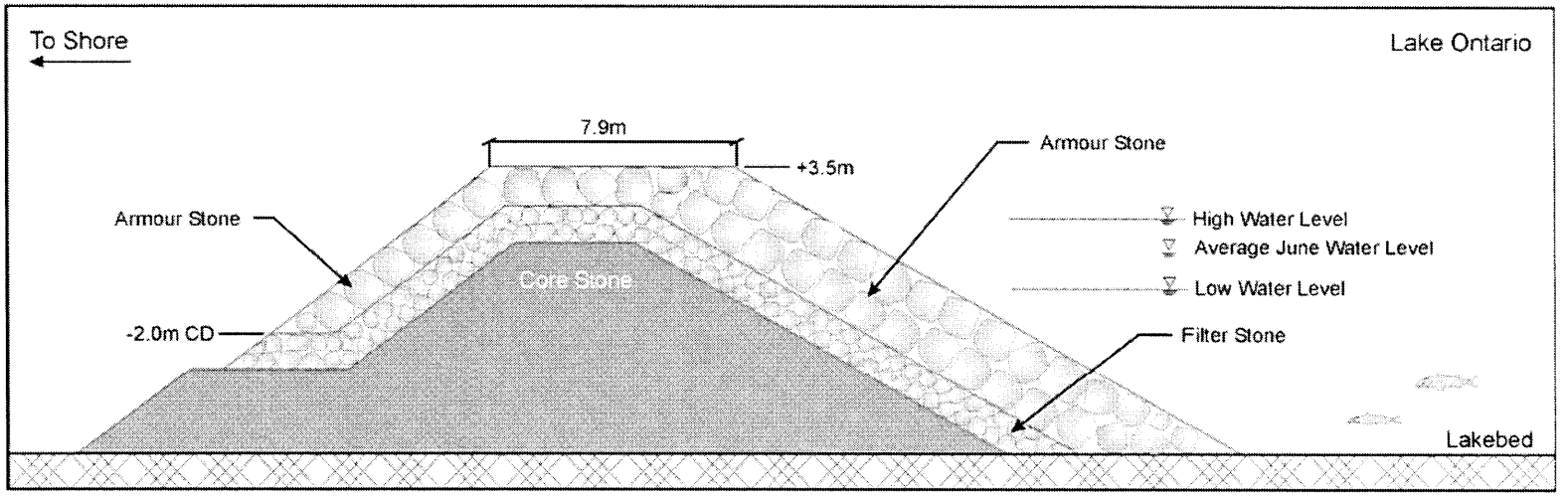
April 5, 2005

Alternative Breakwater Designs

Alternative Design #1: Rubble Mound Berm Concept



Alternative Design #2: Rubble Mound Wide Armour Concept



"Wide Armour" refers to wide range of armour size.

TORONTO WATERFRONT REVITALIZATION CORPORATION

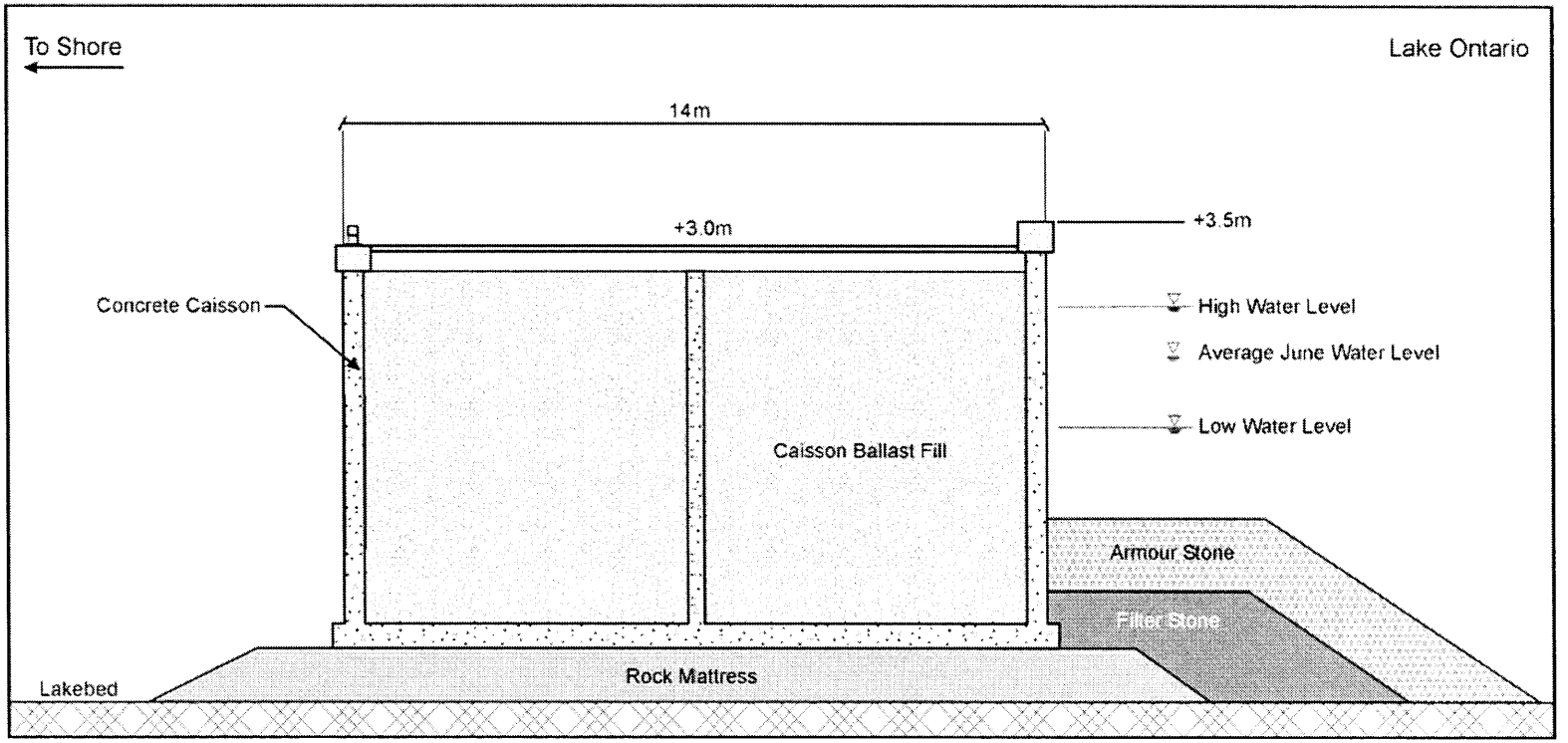
Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Alternative Breakwater Designs

Alternative Design #3: Vertical Wall Concrete Caisson Concept



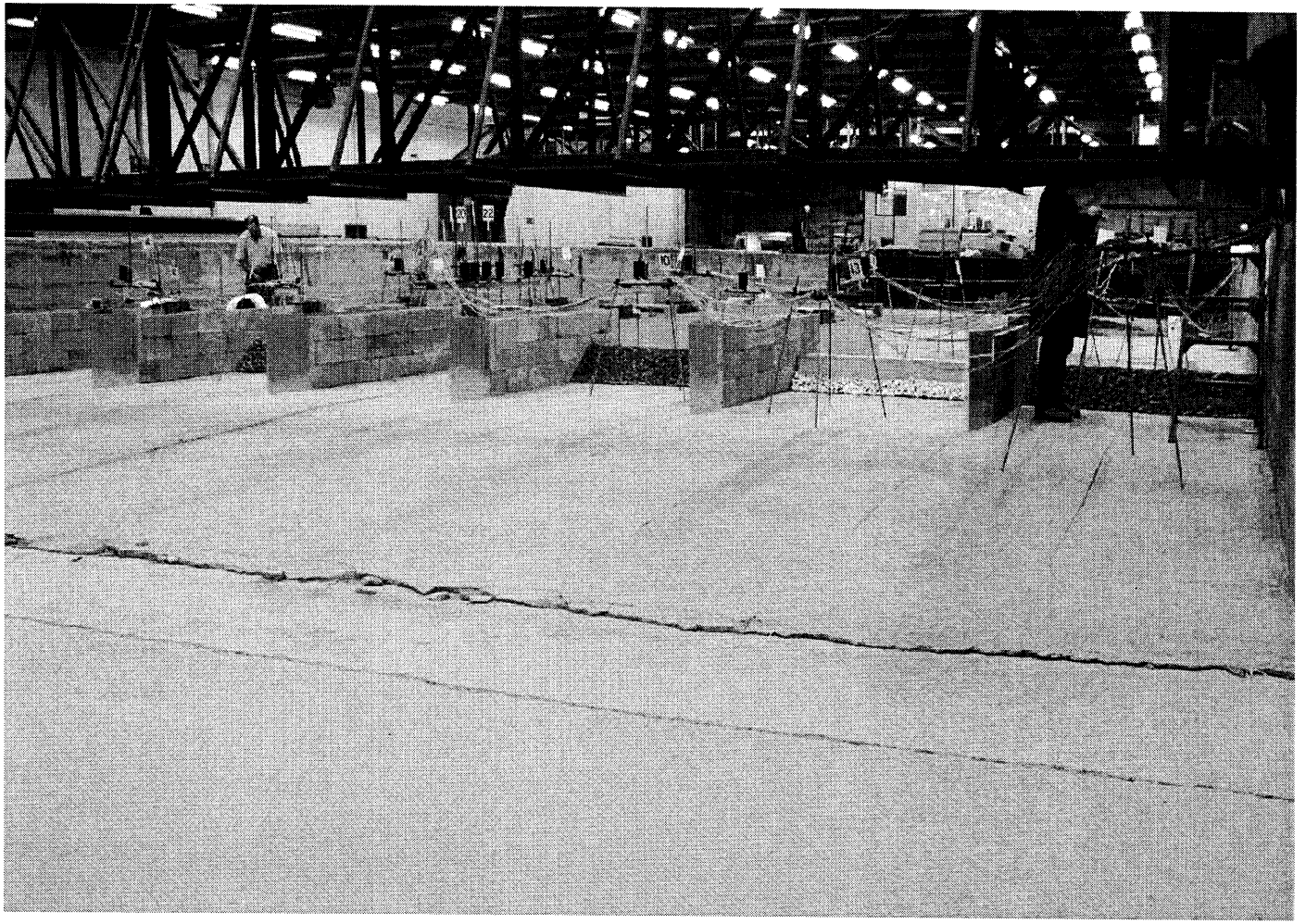
TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Breakwater Design Process



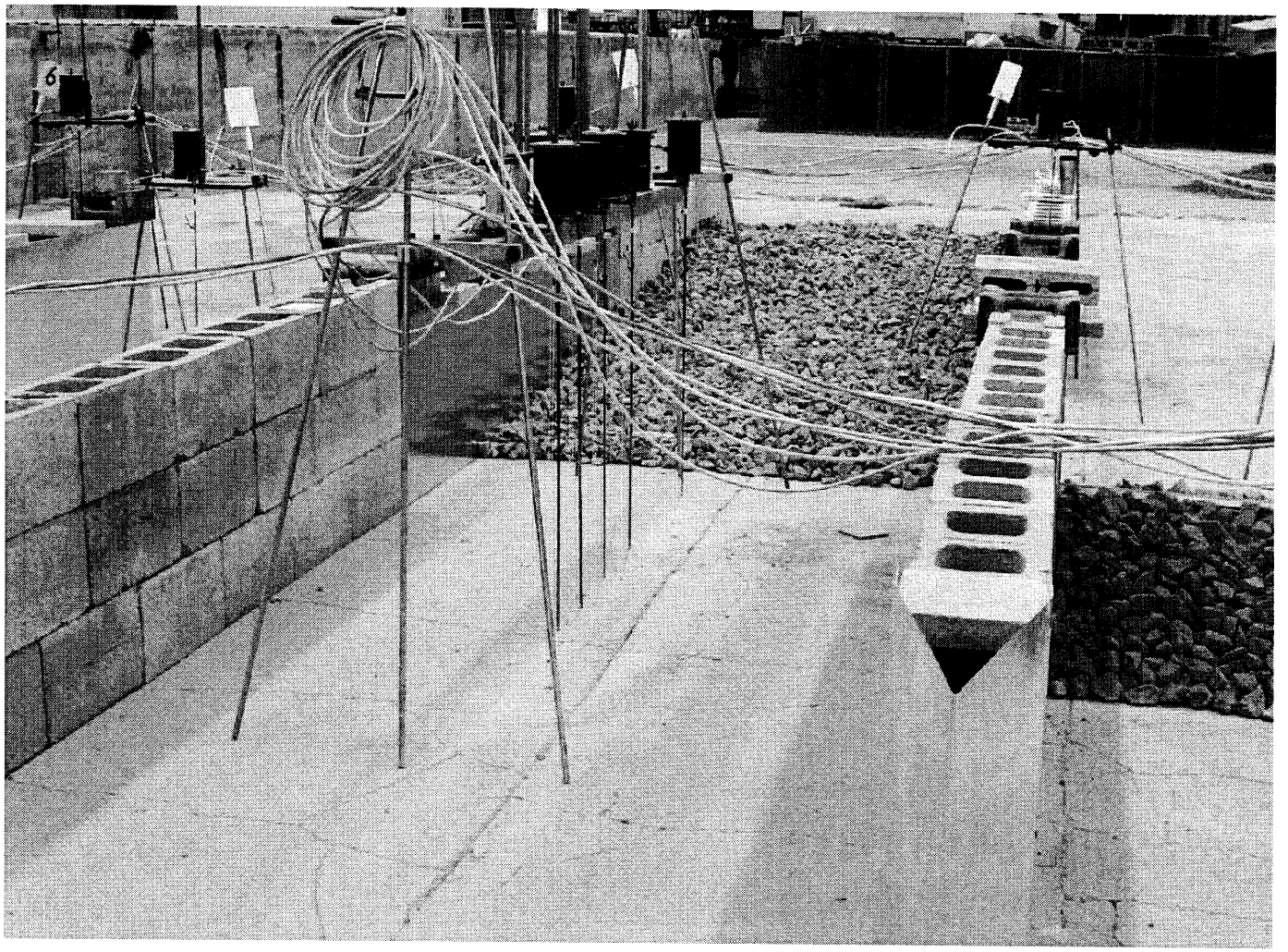
TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Breakwater Design Process



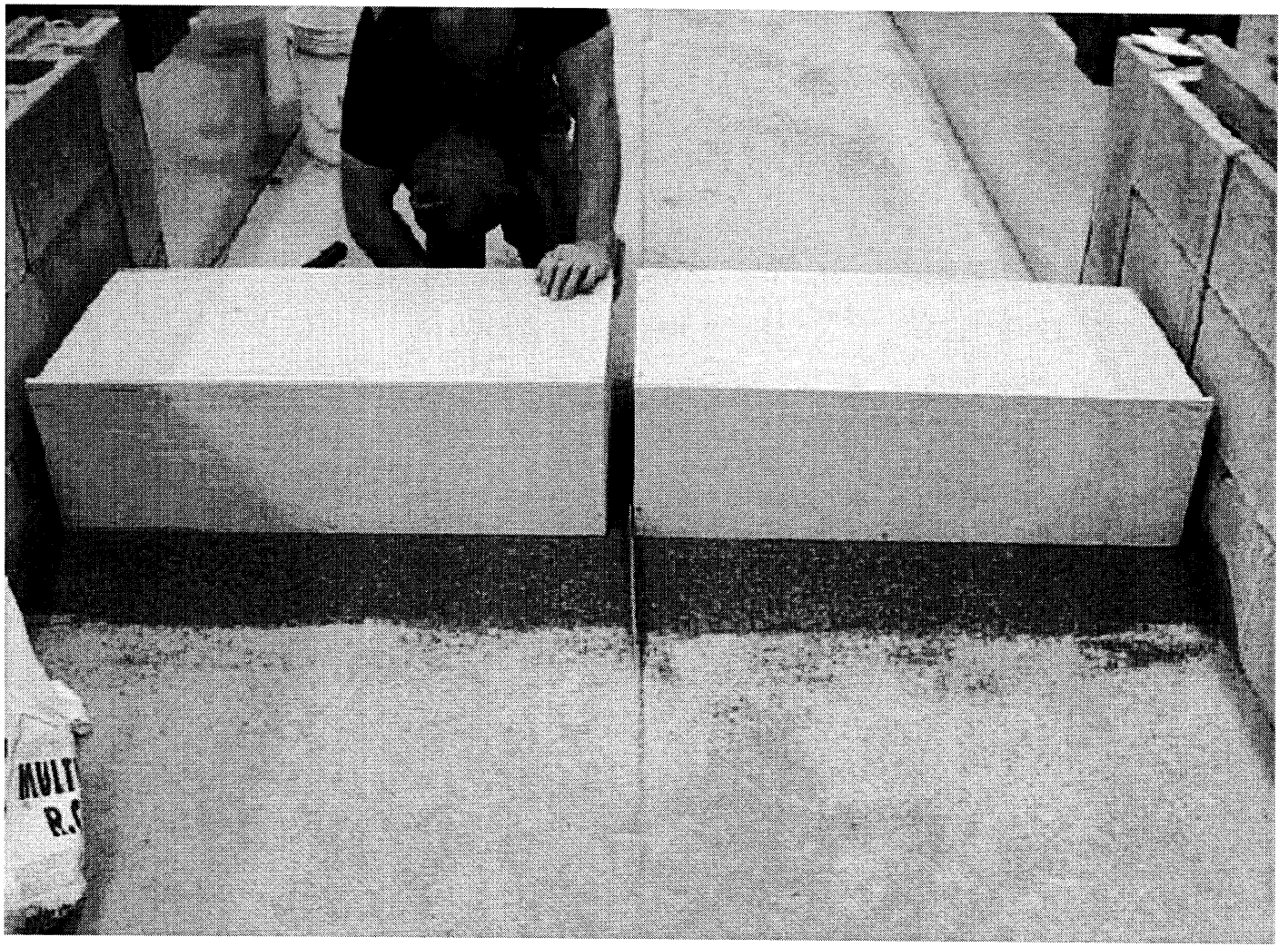
TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Breakwater Design Process



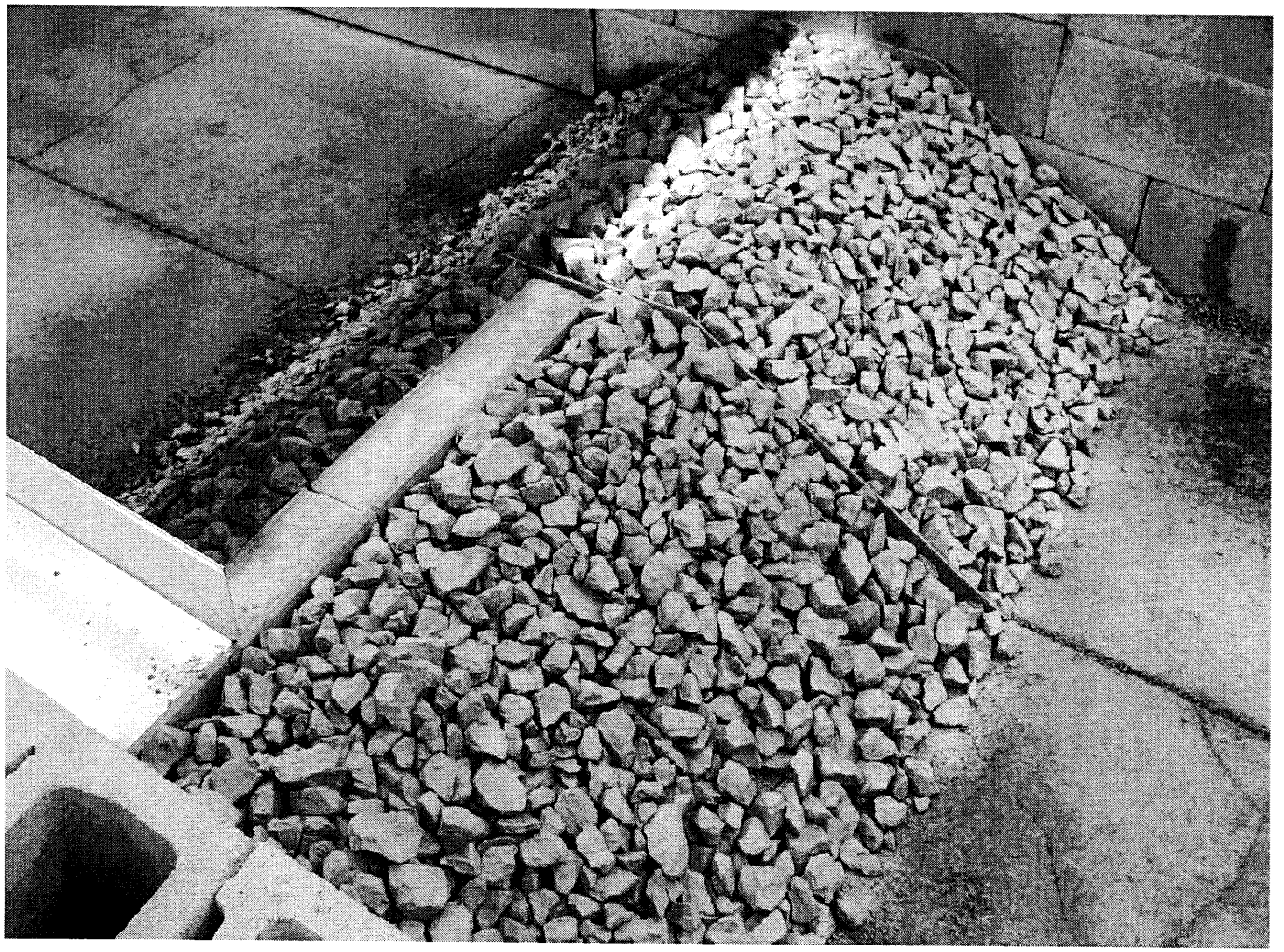
TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Breakwater Design Process



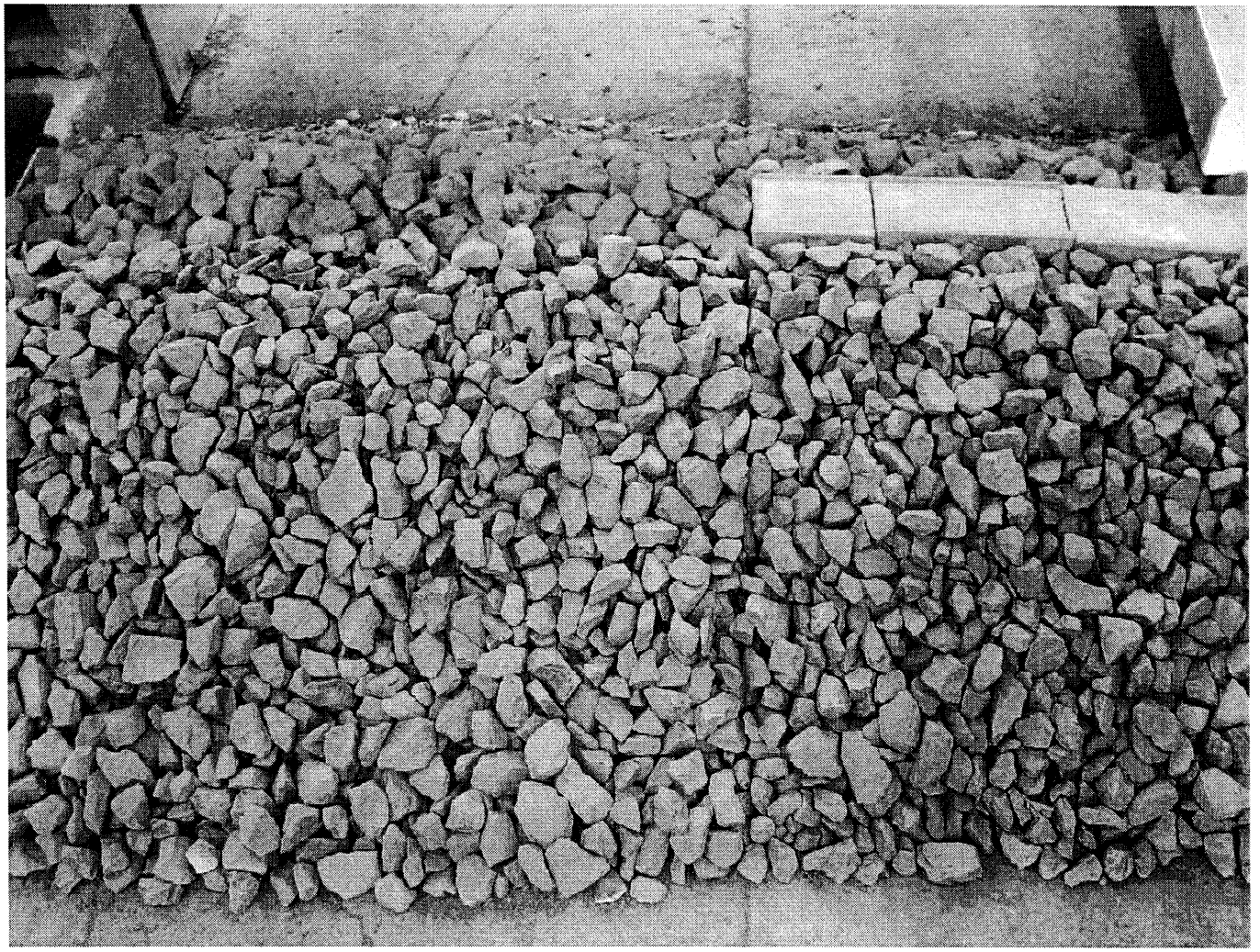
TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Breakwater Design Process



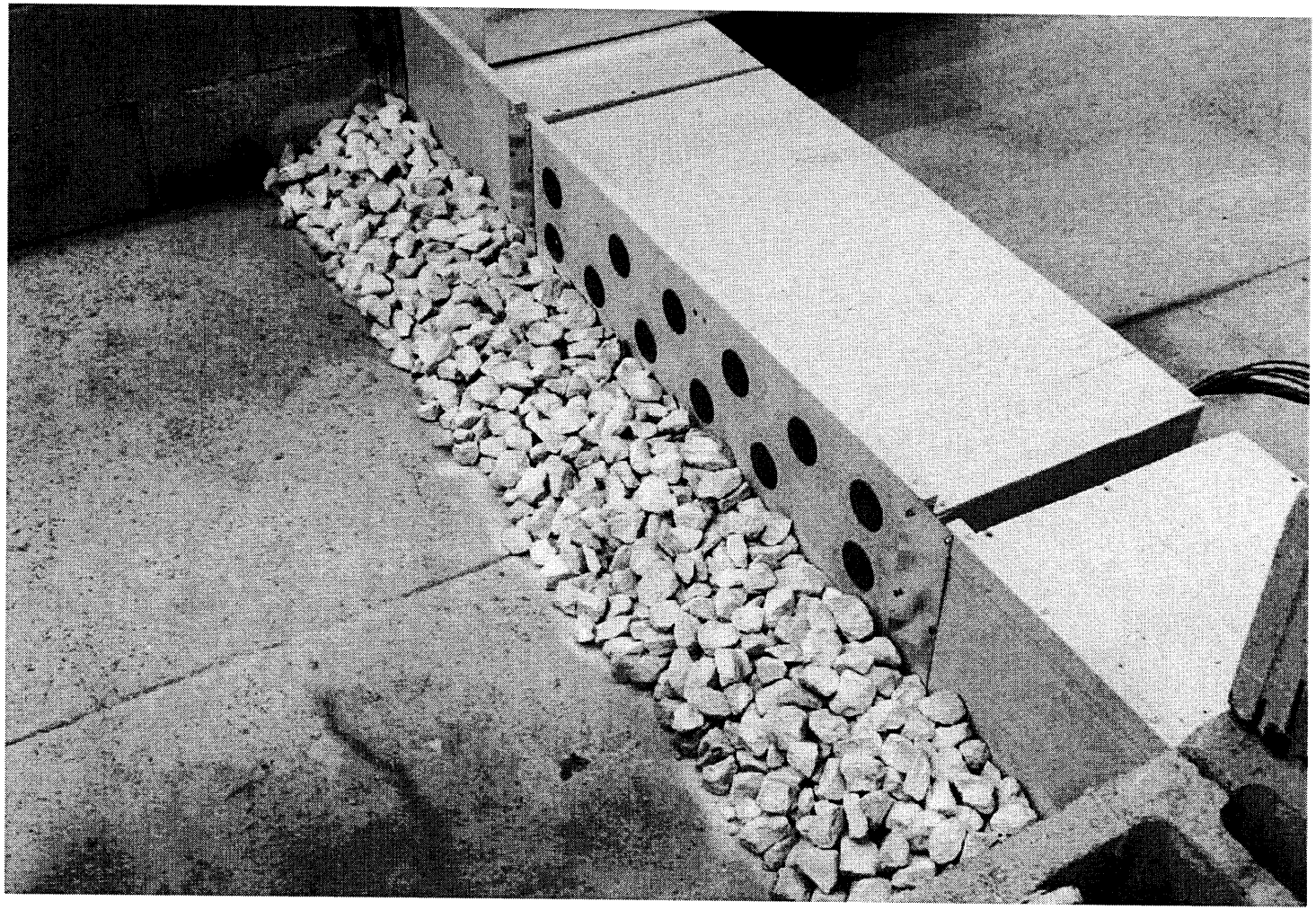
TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Breakwater Design Process



Summer Storm

Severe Storm

TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Breakwater Design Process

Summer Storm

Severe Storm

TORONTO WATERFRONT REVITALIZATION CORPORATION

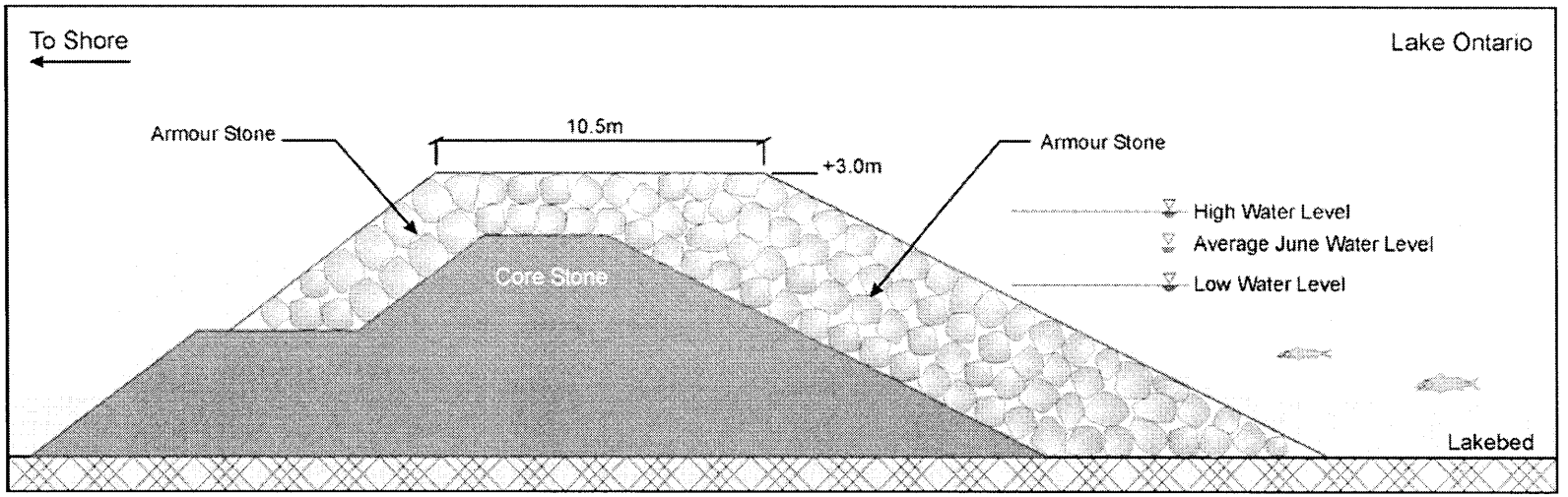
Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Recommended Breakwater Design

Alternative Design #1: Rubble Mound Berm Concept



TORONTO WATERFRONT REVITALIZATION CORPORATION

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

Rationale for the Recommended Breakwater Design

Alternative Design #1: Rubble Mound Berm Concept

- Breakwater performance same as Alternative #2 and better than Alternative #3
- Same wave reflection as Alternative #2 and lower than Alternative #3
- Less risk to meet material supply requirements than Alternative #2
- Construction activity less prone to delays due to adverse wave conditions
- Costs are comparable but risk of increase due to limitations of stone supply.

Western Beaches Watercourse Coordinated EA

Public Information Centre #2

April 5, 2005

The Next Steps . . .

- Comments will be considered in selecting the preferred breakwater design.
- An Environmental Study Report (ESR) will be developed to document the EA planning process followed, and the conclusions reached for the project.
- The ESR will be made available for 30 calendar days. Notification of the ESR submission will be provided.
- If you have any comments or questions following PIC #2, please contact please forward them to the Project Manager before April 22, 2005.

Appendix J

PIC No. 2 Completed Comment Forms

COMMENT FORM

PN 50170

PIC #2 Western Beaches Watercourse Coordinated EA
April 5, 2005

We are interested in hearing any comments you may have associated with the content of the EA study. Thank-you for clearly writing your comments in the space provided below (additional space is available on the back).

Better option
- concerns re: construction schedule + impact on ARC operations
- close off ends to protect from waves / swells - critical
- long term management and operation needs to be resolved.
- few issues to discuss but look forward to working them out.

Comments and information regarding this project are being collected to assist the Project Team in meeting the requirements of the EA Act and the CEAA. With the exception of personal information, all comments will become part of the Public Record and may be used in the Environmental Study Report / Screening Report.

Please submit your written comments before leaving the PIC. If you require more time to comment, please mail in the comment sheet by **April 22th, 2005** to:

Nancy Gaffney
Toronto Region Conservation Authority

5 Shoreham Drive
Toronto, ON M3K 1S4
Tel: (416) 661-6600 ext. 5313
Fax: (416) 667-6278
E-mail: ngaffney@trca.on.ca

COMMENT FORM

PN 50170

PIC #2 Western Beaches Watercourse Coordinated EA
April 5, 2005

We are interested in hearing any comments you may have associated with the content of the EA study. Thank-you for clearly writing your comments in the space provided below (additional space is available on the back).

With the relocation of the course to a position off of Marilyn Bell Park; what is the impact of this course on the existing marine traffic? What mitigation measures are proposed to address these impacts?

MARINE TRAFFIC NEEDS TO BE CONSIDERED FOR INITIAL 650 m COURSE AND SOME CONSIDERATION OF POTENTIAL FUTURE EXTENSION EAST & WEST. (MARINE TRAFFIC IMPACT STUDY WILL BE REQUIRED FOR PORT AUTHORITY CONSTRUCTION PERMIT IF NOT COVERED IN E.A.)

Comments and information regarding this project are being collected to assist the Project Team in meeting the requirements of the EA Act and the CEAA. With the exception of personal information, all comments will become part of the Public Record and may be used in the Environmental Study Report / Screening Report.

Please submit your written comments before leaving the PIC. If you require more time to comment, please mail in the comment sheet by **April 22th, 2005** to:

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E-mail: ngaffney@trca.on.ca

COMMENT FORM

PN 50170

PIC #2 Western Beaches Watercourse Coordinated EA
April 5, 2005

We are interested in hearing any comments you may have associated with the content of the EA study. Thank-you for clearly writing your comments in the space provided below (additional space is available on the back).

Glad to see a "multi-sport" perspective incorporated and a view toward daily use from a single event or festival use. Nice change from March 10, 2005 meeting.

However, there seems to be a disconnect between goals of expanded use, growth and more boat traffic and the message that "no buildings are planned". How can growth happen if no launching point.

Biggest concern is "course management and jurisdiction of use. The TWRC, seems to be deferring to Parks + Rec, and also the community to step up and be involved. This is putting the course before the horse. Why don't we figure out best recreation use, complete the waterfront boating study, then design the best breakwall design and the best starting point.

Construction phase - BIG CONCERN that the unknowns - amount of soil, rocks, and staging, and time, shore access. It is foolish to begin without knowing and without presenting it to the public

Comments and information regarding this project are being collected to assist the Project Team in meeting the requirements of the EA Act and the CEAA. With the exception of personal information, all comments will become part of the Public Record and may be used in the Environmental Study Report / Screening Report.

Please submit your written comments before leaving the PIC. If you require more time to comment, please mail in the comment sheet by **April 22th, 2005** to:

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COMMENT FORM

PN 50170

PIC #2 Western Beaches Watercourse Coordinated EA
April 5, 2005

Contact Info

[redacted]

[redacted]

Appendix K

PIC No. 2 Verbal Comments Received and Verbal Responses Provided

SUMMARY OF VERBAL COMMENTS RECEIVED IN THE QUESTION & ANSWER PERIOD FOLLOWING THE FORMAL PRESENTATION GIVEN AT PUBLIC INFORMATION CENTRE No. 2

No.	Summary of Comments Received	Summary of Responses Provided
1.	▪ Has there been any consideration of how the ice flows will affect the new breakwater?	▪ This is a factor that has been taken that into consideration, realizing that the ice flows can be quite severe. The breakwater will be designed that it will withstand the effect of ice flows.
2.	▪ I would like to know about the width of the usable part of the watercourse and the new location in proximity to Ontario Place.	▪ The watercourse will be 135m from shore and is measured from the shoreline, over to the depth of the sloping breakwater. There will be 135m of usable watercourse as the breakwater will be located slightly lakeward from the breakwater. Additionally, the preferred location is approximately 2,100m west of Ontario Place.
3.	▪ How is the watercourse aligned with TWRC's Sustainability Framework?	▪ We are incorporating TRCA's Toronto Waterfront Aquatic Habitat Restoration Strategy (TWAHRS) into the Project to ensure that habitat compensation exceeds the requirements of the environmental assessment process. This will ensure that the natural environment is improved in conjunction with the creation of a legacy on Toronto's waterfront.
4.	▪ The Sustainability Framework sets out the objective of extensive habitat improvement. What are the plans in that regard? The widely cited definition of sustainability is to meet the needs of today without compromising the needs of future generations. Will the current plans for the watercourse jeopardize opportunities for future generations to improve habitat within the watercourse?	▪ There are currently no plans to soften the shorewall, however we are not precluding future opportunities to soften the shorewall in the future. In terms of the breakwater, the preferred designed is for a rubble mound breakwater as opposed to caisson. The sloped, rocky sides will provide opportunities of the creation of fish and aquatic plant habitat.

No.	Summary of Comments Received	Summary of Responses Provided
		▪ Environmental, social and economic factors are examined as part of the environmental assessment process. TWAHRS is widely accepted and has been embraced by TWRC; part of the Project's intent will be to enhance surrounding habitat. We can begin to focus on the enhancements to the natural environment as the preferred concept has been determined; information about enhancement and mitigation will be documented in the Environmental Study Report which will be available for public and agency review. Further, at a minimum, the Project must adhere to "no net loss" for fish, aquatic and terrestrial habitat.
5.	▪ There are hatch marks between the old and the new breakwater. Please explain what this means.	▪ The hatch marks signify locations on the design where discussions still need to take place. Currently, temporary structures closing the watercourse are being considered to avoid the removal of the connections between the new and old breakwater, if the new breakwater is extended.
6.	▪ Will a railway or car be able to run on the breakwater to facilitate filming?	▪ There will be no land access to the breakwater and as such no cars will be able to run on the breakwater. However, we are not precluding a railway for filming on the breakwater.
7.	▪ What is the height of the proposed breakwater?	▪ The new breakwater will be 4ft higher than the current breakwater.

No.	Summary of Comments Received	Summary of Responses Provided
8.	▪ I appreciate the changes that have been made in regard to the preferred design, however my major issue is that the design reminds me of the US Army Corp of Engineers and how their projects have channelled problems elsewhere. I have a problem with straight walls, in regard to sedimentation and scouring; have sedimentation flows been modeled? I think you should consider a wall design that picks up on some natural patterns and acts as a back bay. There should be more natural movement. Also, I like that people will be able to walk along the breakwater. Take this design another step further and incorporate more positive attributes.	▪ We are examining the options to enhancing the features of the breakwater, including habitat enhancement. We have examined sedimentation loads and scouring and are confident that we are not creating additional problems in relation to sedimentation.
9.	▪ I am not sure that a straight breakwater works, further modeling needs to be done.	▪ Modeling on sedimentation loads and scouring has been examined and will be highlighted in the Environmental Study Report for your review.
10.	▪ Has anyone conducted a traffic analysis within the proposed watercourse? The preferred breakwater solution will create additional traffic within the watercourse. Is there any possibility of shifting the location of the watercourse to alleviate potential traffic problems?	▪ Shifting the watercourse places the Cowan Avenue outfall work back into the Project and is not being considered. The management of the watercourse will be overseen by a working group in conjunction with the City of Toronto. We are looking to the current users to determine how the new watercourse should be managed for traffic,
11.	▪ The Outer Harbour Sailing Federation compiled a detailed analysis of users in this area.	▪
12.	▪ The International Dragon Boat Federation did not choose Welland because it did not have a boathouse and tower. What facilities are being planned for this project?	▪ There are no plans for a clubhouse or any other permanent facilities. Marilyn Bell Park will be used for staging and temporary facilities will be utilized; the trail system will be enhanced within the Park.

No.	Summary of Comments Received	Summary of Responses Provided
13.	▪ Are there any funds in the budget to modify the shorewall?	▪ No, modifications to the shorewall are not part of the Project. ▪ Additionally, there will be less of a need to modify the shorewall once the new breakwater is constructed.
14.	▪ I did a tour of the bid cities of the 2012 Olympics. We should focus on implementing the maximum as it is difficult to upgrade from a minimum. A watercourse camera using a monorail along the breakwater is feasible. The minimum width of a watercourse is 110m and although the depth required is 3.5m, most watercourses are 2.5m. I hope the watercourse will accommodate all user groups; we'll start with 650m and hope to go to 2200m. Along the shoreline, gabions can stop the waves, but the best thing I have seen is bulrushes. With regards to watercourse traffic, no course will survive on one sport. The users will work out the traffic problem and the Argonaut Rowing Club can figure it out. Politically, this is the best place for the watercourse. Let's get the new breakwater up	▪
15.	▪ I think it is a great thing to move the watercourse further west towards the middle of a busy community of users. I would like the breakwater moved further west to accommodate the moorings for the Toronto Sailing and Canoe Club (TSCC).	▪ We will not be putting moorings inside the new breakwater. We need to further examine the extent of TSCC's usage so that the new breakwater does not negatively influence your current use. ▪ We understand that the breakwater in proximity to TSCC is in a state of poor repair. We are undertaking a preliminary study to examine the use of the removed breakwater to repair the breakwater further west.
16.	▪ I am concerned with safety of the watercourse users as often boaters are left on the outside of the breakwater. Will safety equipment be provided?	▪ The provision of safety equipment will be examined and further discussions will be had with in regard to this equipment.

No.	Summary of Comments Received	Summary of Responses Provided
17.	▪ Further to my earlier question, I think you are doing the minimum in regard to fulfilling the goals of TWRC's Sustainability Framework. I think you should review the worksheets from the appendix of this document. I realize that the budget is not available to extend the breakwater further out into the lake however we need to be maximizing community objectives and not compromising the needs of future generations.	▪ We are not building the minimum, not a 110m but 135m watercourse. There will be room within the watercourse for habitat enhancement and TWRC is working with TRCA to ensure that the sustainability objectives are met. TWAHRS is a waterfront wide strategy far exceeding the requirements of replacing altered fish habitat. TRCA was selected as the eligible recipient to oversee the Project to ensure sustainability.
18.	▪ User groups are concerned with the environment. We build marinas, using solid walls and now with rocks creating natural reefs. There is opportunity to create habitat through design. The shorewall was screwed up with the concrete wall. We want clean water and air, plus a facility that is environmentally sustainable.	
19.	▪ Moving the watercourse west is a good idea. Do you know of any racing courses in the world that have a curved breakwater? ▪ Public Comment: No, they are straight, however the shoreline may not be straight.	▪ If you curve the breakwater, the watercourse will need to be longer. ▪ Public Comment: Lanes are straight but the watercourse may be curved.
20.	▪ If you extend the watercourse, you will kill the TSCC. The absence of moorings within the new breakwater will kill the TSCC. Has the Waterfront Design Review Panel reviewed the preferred alternative?	▪ This Committee is currently being formed. We have not planned on doing a peer review, however will consider the possibility. Currently, we are interested in getting TRCA's input on sustainability.
21.	▪ I think this is a very exciting project. I think you should put the watercourse east of Ontario Place to also accommodate the air show. Permanent viewing areas should be provided.	▪ We have a preferred design for the watercourse, on the west side of Ontario Place. We have met with planner of the air show and they bring temporary bleachers for this event. We will follow suit as permanent structures are not part of the Project.

No.	Summary of Comments Received	Summary of Responses Provided
22.	▪ Do we have a design of an extended watercourse? I have concerns with construction, specifically in regard to staging and timing. Will there be public consultation about construction processes?	▪ We do have a design for the extended watercourse as shown earlier in the presentation. With respect with construction issues there will be additional public involvement, possibly through the creation of a construction liaison committee or additional public information centres. We have a construction manager on team to oversee all construction activities.
23.	▪ You should build a similar watercourse as those in New York and Paris. At future meetings, show us what the future of this watercourse could hold.	▪

Appendix L

Notice of Completion

TORONTO WATERFRONT REVITALIZATION CORPORATION

TORONTO

CLASS ENVIRONMENTAL ASSESSMENT – MASTER PLAN
NOTICE OF STUDY COMPLETION
WEST DON LANDS PRECINCT PLANNING AREA

The Toronto Waterfront Revitalization Corporation in cooperation with the City of Toronto has prepared a Master Plan to address water, sanitary servicing, stormwater management, and transportation needs for the West Don Lands Precinct Planning Area. The West Don Lands is an 80 acre area located generally east of Parliament Street, south of King Street, west of the Don River and north of the Gardiner Expressway.

This Master Plan was conducted in accordance with the requirements of the Municipal Class Environmental Assessment, June 2000, which is an approved process under the Environmental Assessment Act and has been conducted to a level of detail satisfying the Class EA requirements for both Schedule B and C projects. As such, no further Class EA studies or public notification will be required.

The Master Plan has been completed and by way of this Notice, is being placed in the public record for final review. Subject to comments received as a result of this Notice, and the receipt of necessary approvals, the TWRC and the City intend to proceed with the implementation of the following projects in the Master Plan:

Schedule B Projects

- Construction of new watermains in road allowances to serve new development;
- Construction of new sanitary sewers in new road allowances
- Construction of a new wastewater pumping station in the District
- Construction of new storm sewers in new road allowances
- Construction of a new storm sewer outlet into the Inner Harbour
- Abandonment of Overend Street (between Front Street East and Mill Street)
- Abandonment of Cypress Street (between Eastern Avenue diversion and Front Street East)
- Abandonment of Water Street (north of Mill Street)
- Abandonment Front Street East (from a point just east of Overend Street to Bayview Avenue)
- Widening and reconfiguration of Mill Street east of Cherry Street
- Widening and reconfiguration of Front Street East, east of Eastern Avenue

Schedule C Projects

- Construction of stormwater quality measures (oil and grit separators, filters and ultra violet disinfection)
- Widening and reconfiguration of Cherry Street south of King Street East to the CN rail corridor
- Reconfiguration of Bayview Avenue south of Eastern Avenue including the abandonment of Bayview Avenue south of the Eastern Avenue – to be replaced by a new Bayview alignment.

The Master Plan is available for review at the following locations during normal business hours:

Toronto Public Library
City Hall Branch (Nathan Phillips Square)
100 Queen Street West
Toronto, Ontario
M5H 2N3

Toronto Public Library
St. Lawrence Branch
171 Front Street East
Toronto, Ontario
M5A 4H3

NOTICE OF COMPLETION OF
ENVIRONMENTAL STUDY REPORT
WESTERN BEACHES WATERCOURSE FACILITY
ENVIRONMENTAL ASSESSMENT

PR137MAY

The Project

The Toronto Waterfront Revitalization Corporation (TWRC) and the City of Toronto (City) as co-proponents are proposing to construct the new "Western Beaches Watercourse Facility" along the Western Beaches across from Marilyn Bell Park in response to the City having been selected to host the International Dragon Boat Federation (IDBF) Club Crew World Championships (CCWC) in 2006. The project will involve construction of approximately 650 metres of new breakwater and removal of the existing breakwater in that section.

The Process

The Project is being conducted through a Coordinated Environmental Assessment (EA) process in accordance with the requirements of the approved Municipal Class Environmental Assessment (Class EA) and the Canadian Environmental Assessment Act (CEAA). The proponents have planned the Project under Schedule 'C' of the Class EA process. The Environmental Study Report has been completed and is available for public review and comment for a period of 30 calendar days. Subject to comments received as a result of this Notice and the receipt of necessary approvals, the proponents intend to proceed with implementation in 2005.

You may inspect the Environmental Study Report during normal business hours at the following locations:

1. Toronto and Region Conservation
5 Shoreham Drive
Downsview, ON, M3N 1S4

2. Toronto Waterfront Revitalization Corporation
207 Queens Quay West, Suite 822
Toronto, ON, M5J 1A7

3. Urban Affairs Library
Metro Hall
55 John Street
Toronto, ON, M5V 3C6

Your written comments regarding the Environmental Study Report must be received by TWRC and the City at the address below prior to July 1, 2005.

Toronto and Region Conservation
Attn: Nancy Gaffney, B.Sc., Waterfront Specialist
5 Shoreham Drive
Downsview, ON, M3N 1S4
Email: ngaffney@trca.on.ca

If concerns regarding this project cannot be resolved in discussion with the proponents, a person may request that the Minister of the Environment make an order for the project to comply with Part II of the Environmental Assessment Act (referred to as a Part II Order), which addresses individual environmental assessments. Requests must be received by the Minister at the address below prior to July 1, 2005. A copy of the request must also be sent to TWRC and the City at the address provided above. If no request is received by July 1, 2005, the Western Beaches Watercourse Facility will proceed to implementation as outlined in the Environmental Study Report.

Minister of the Environment
12th Floor, 135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5

This Notice issued May 31, 2005